

GREEN'S FRUIT GROWER

The Oldest Fruit Journal in America



Rochester, N. Y.

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Green's Fruit Grower

Three Arsenical Insecticides and How to Use Them

One of the numerous insecticides in which arsenic in some form is the poisonous ingredient, only three are in common use in Arizona at the present time. These are arsenate of lead, Paris green, and London purple. These are successfully used in several different ways, and, it should be said, are frequently used mistakenly against plant lice and other insects that cannot be destroyed by poisons of this class, says Arizona Bulletin.

Arsenical insecticides are suitable only for use against insects that chew the leaves, the evidence of their attack being exhibited in the form of "ragging" of the leaves, "skeletonizing" of the leaves, or of irregular holes. Beetles in both the larval (grub) and adult stages, grasshoppers in both the nymphal and adult stages, and the larval (caterpillar) stage of butterflies and moths are the principal insects which feed by chewing. Most of the best known sucking insects belong to the bug group, which includes plant lice, scale insects, the squash bug, and the various leaf hoppers. Leaves attacked by such insects may wilt from the effect of the loss of plant juices, or become spotted, due to the extraction of the chlorophyll or green coloring matter, but no holes are made or external parts of the plants eaten. Arsenical or stomach poisons are ineffectual in combating these insects. They require contact insecticides, such as nicotine, whale oil soap, and lime-sulphur solution.

Not all chewing insects can be destroyed by means of arsenical insecticides. Some are borers in wood or in the stems of plants of various kinds, while others live in fruit. As a rule, however, these chewing insects which attack the leaves or the external parts of the plant can be controlled by the use of this class of stomach poisons.

Reclaiming Vast Acreage of New York Swamp Lands

There is a surprising lack of information according to farm brokers as to the extent of the undertakings of agriculturists in western New York. If some of these undertakings, it is said, were being conducted in the West their size and importance would be heralded throughout the country. As an instance is cited the extensive reclamation work which is being done by the Western New York Farms Company.

Where once was impenetrable swamp this company is at present developing an estate of 12,000 acres, mostly fine deep muck. Under the supervision of their engineer, T. E. Knowlton, some thirty miles of main canals are being dredged and many miles of lateral ditches are being dug or blasted. Property which was formerly overflowed and worthless is being raised to the condition of the high priced lands in Irondequoit and South Lima. Oak Orchard Swamp, long known as the hunter's paradise, is being made arable by the means of the caterpillar tractor.

Killing Cockroaches

Mix one part of plaster of Paris and three or four parts of flour. Place this dry mixture in a saucer or on a flat piece of wood or tin where roaches are numerous. Nearby place another flat plate containing pure water. Supply a few inclines of wood or cardboard from the floor to the edge of the plate or saucer to give easy access. Float one or two thin pieces of wood on the water so that they will touch the edge of the dish. The insects readily eat the plaster mixture, become thirsty and drink. The water makes the plaster set in the intestines and kills the roach. Such traps may be placed in pantries, and bakeries in particular, with good results.

Surplus Peaches

Mr. C. A. Green:—In regard to raising fruit for market I will state the case of my brother in Tennessee. He has a lot of peach trees, but is unable to sell the fruit, either dried or canned, to much profit. He thought if he had a canning outfit he could save them and make something. He got it, and now has about 300 (three hundred) cans of peaches that he cannot dispose of. There are some small towns about and he is about 40 miles west of Nashville. It seems they ought to buy home products as well as those of far off factories.

I have become almost discouraged with fruit raising myself even for home use,

which I certainly appreciate, on account of the insects and things which destroy it. Now there's the Elberta peach which I looked forward to producing some fine fruit. The gum has begun to ooze out of nearly every limb and it will be ruined if this goes on. I tried to find the worm, but found only dark spots as I plied the blade of a small knife. But what I wish to ask you, Mr. Green, is, do you know any place or way that my brother can sell his canned peaches? If not, what is the use to raise peaches to sell? I understand the cans are labeled with nice pictures of fruit—C. M. B., Ind.

Reply: This letter teaches me that there are yet problems to be solved in connection with fruit growing, as there are in regard to almost everything else in the world. In planting a peach orchard of considerable size many things must be taken into account—the character of the soil, the amount of capital, the business ability of the owner, his location, etc. Before planting the orchard he should investigate and learn whether others are making orchards profitable, but the right kind of a man can sometimes succeed in a business enterprise where many others have failed.

slow growing trees. It has been discovered that the germs of pear blight may be communicated to the trees by insects that feed upon the blossoms, or through the soft immature wood which may be punctured by insects. This disease is worse some seasons than others. It is more serious with some varieties than others. Kieffer pear seems to be almost exempt from blight.

Fertilizer for Strawberries

Editor Green's Fruit Grower: What are the benefits derived from a liberal use of pure ground bone meal on strawberries? Is some other fertilizer better? When and what would be your way of application?—H. H. Russell, Wis.

Reply:—Ground bone acts slowly in the soil but continues for many years. According to this fact it is not considered so desirable for strawberry plants as stable manure or as nitrate of soda. The nitrate should not come in contact with the leaves, especially when moist. The stable manure can be applied with advantage in early winter and acts a double purpose in enriching the soil and protects the plants from heaving by frost.

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Please send me a can of your canned peaches and state the price to me. I will pay the express charges on this. If the fruit is good I can use some of it in conjunction with my friends. Possibly you are not an expert salesman. Every fruit farmer should be a good salesman. I am not troubled with the oozing of gum that you speak of except where it is caused by the gnawing of the white grub.

Pear Blight

If you know of any remedy for blight in pear trees other than cutting off the blighted parts on the tree please publish it and oblige.

Cutting off the blighted parts does not cure the blight on my trees.—Peter S. Duncan, Pa.

Reply: I know of no other or better remedy for pear blight than to cut off all diseased branches quickly after the discoloration of the leaves occurs, making the cut at least one foot below the infested part, which is shown by the discoloration of the bark, and burning the blighted branches quickly.

Rapid growing pear trees are more likely to be infested with pear blight than

WOMAN'S LOVE Nine Parts Agony, One Part Real Happiness

What is love? "It is desire tempered with reverence" says George Scarborough, the dramatist. "It is the kiss on the brow plus the kiss on the lips. It is physical magnetism combined with respectful tenderness. With love married life is heaven."

That's a modern man's definition, and it's infinitely more articulate than anything nine men out of ten can be induced to profess. Men love; women love and analyze love. Now we have a woman's analysis to set aside Mr. Scarborough's. It is made by Mrs. G. Vere Tyler, who is the daughter-in-law of President John Tyler and the author of love stories. In her latest book she has made a special study of the effect of love on both men and women, of its combined irresistibility and irresponsibility.

"Love is an invincible force, like light or electricity," she told me. "As light creeps into every dark corner, pries under every crack, so love permeates the heart. Or sometimes it enters in a blinding flash, like lightning. A person in love is like a

house lit up, and, like a house, remains a passive factor in the illumination. Love always seeks the individual; the latter doesn't seek love.

"Is there any other theory," continued Mrs. Tyler, "which will account for the follies and vagaries of lovers? A man who shows impeccable good sense in the choosing of his friends falls in love with some woman who is socially his inferior and mentally and temperamentally fitted to make him miserable. Yet while his passion lasts there is no sacrifice he won't make for her.

"Or a young woman, cultured and refined and charming, throws away her present and her future and brings misery upon her whole family for the sake of some worthless scamp who soon laughs at her devotion.

"Even in the case of an uneventful courtship and marriage, the disinterested comment is most frequently, 'I wonder what they see in each other.' All of which goes to show that love is not a state into which the individual consciously enters. It is an enchantment thrown upon him from the outside, until, as with Titania, even the ears of an ass seem beautiful to him.

"If there were some one who knew even as much about love as has been discovered about electricity!" Mrs. Tyler sighed, "then its going as well as its coming might be controlled. Now the batteries slowly empty and we can do nothing. That is especially the tragedy of woman."

"You think love so much more important to women than to men?" I asked.

"Love sets men's wings growing; it clips the wings of women. To men love is inspiration; to women it is subordination. So, in a sense, love is more important to men. Yet because it spurs them on to make their lives fuller and richer, they miss it less when it goes, while women, whose lives are narrowed and confined by love, are left pathetically helpless by its departure."

"But you speak of love passing in such an assured way," I protested. "Don't you believe that love may last, that constancy is neither a bogie nor an impossibility, but an attainable ideal?"

"Constancy is a question, not of love, but of temperament," declared Mrs. Tyler. "The prosaic, matter-of-fact person may be constant to such love as he comes to know, but I believe that the imaginative, sensitive, highly strung individual will have a long succession of loves."

So be warned, girls! The business man, even though he be tired and the Stock Exchange be closed, will make a better husband than the poet.—New York World.

The Apple Is European

Since the apple is not a native of America but was imported from Europe, pioneer settlers had to wait for the delicious fruit until they could plant trees and bring them into bearing. One of the most precious possessions carried by many a family in the prairie schooners or early days was a small bag of apple seeds carefully saved against the time when a little ground could be cleared and a new home started, says Stockman and Farmer. Occasionally wild trees were found growing in small clearings in the forest where they had been planted by the Indians, for the natives quickly recognized the value of the apple and planted seeds near their permanent camping grounds. In many places throughout the northern states, some of these old Indian trees still stand, and in northern Michigan pear trees at least 200 years old may be found growing among the pines and hemlocks—tall, straight trees with smooth, limbless boles—bearing far above the ground their yearly loads of fruit.

Ohio settlers were more fortunate than were those of other states in finding apple trees already planted for them. Some of these were doubtless of Indian origin, but the great majority were planted by a peculiar and somewhat fanatical personage known as "Johnny Appleseed."

President Wilson's Indorsement

"If you are going to buy it, buy it now. That is a perfectly safe maxim to act upon. It is just as safe to buy it now as it ever will be, and if you start to buying, there will be no end to it—and you will be a seller as well as a buyer."

"Earth is here so kind, that just tickle her with a hoe and she laughs with a harvest."—Douglas Jerrold.

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Harvesting and Marketing Small Fruits

Written for Green's Fruit Grower by J. S. UNDERWOOD

FOR a good many years I have grown fruits for the market and will say that in order to receive the greatest returns from the fruit, quality is the first consideration, the manner in which it is packed the second, and the package the third. There is always a good demand for a first-class article, but it must be first-class. One of the reasons why markets become glutted is because they are flooded with fruit of an inferior quality.

Berries that are small, green and knotty should never be placed upon the market. Packages that are rough, containing holes and knots, should never be used for carrying fruit. It takes care to harvest fruit that is to go on the market since it must stand handling and be on exhibition for some time before cared for by the consumer or canner.

When the crop is being handled we should feel that we are moving something precious and should do the work carefully. One may give too much care to the harvesting and marketing of a crop that has been carelessly grown, as in this case it doesn't amount to much anyway, but when we have taken great care and worked hard and first-class fruit is awarded us for our efforts, then we cannot consistently harvest and market it in a careless manner.

In harvesting my small fruit crops I never obtained the services of very small children. They usually pick with one hand and hold a box with the other, and as one hand becomes tired they will change the box to the other, thus staining the box. Then, again, unless closely watched they will run here and there, picking only where the berries are thickest.

If it is possible for me to do so, I always obtain experienced pickers that have picked for me in the past. They understand just how I want the work done and I am thus saved much valuable time at the shed.

Two pickers are assigned a row and made to complete that row before allowed to go on another. By having two pickers on a row, fruit that is overlooked by one is found by the other. My picking crates are made from old goods boxes and hold six and eight quarts. These are put away in the shed when the picking season is over. Each picker has his own crate. Care is taken to see that the crates are strong, so as not to break and spill the fruit while it is being carried to the packing shed.

My packing shed is thirty feet long and fifteen feet wide. I have a wide platform or table all around it except the front end. To keep sun, wind and rain out, heavy curtains are used instead of plank, and the top is covered with roofing. The curtain on the north side is kept up except when it is raining or the wind blowing. The other curtains are kept up or down to let in the breeze and keep out sunshine, wind or rain as conditions may require throughout the day.

I have my pickers press each box down slightly and fill up all hollow places with good, nice fruit. By doing this the fruit is about on a level with the top of the box when it arrives at its destination and soon attracts the eye of a customer. Berries must never be allowed to stand in the sun after being harvested, as it is injurious to their keeping qualities and they will go on the market in a bad condition.

Quality Not Quantity the Key Note to Success

I never ship berries that took a rain while ripe. They are apt to sour before they arrive at destination, and will seldom pay expenses. I usually allow my pickers to harvest these for canning purposes or for wine making. In my next picking I am careful not to put in any

soft berries that might have been left from the previous picking. I examine each box carefully, and if I find any inferior fruit I do not attempt to remove it with my fingers. I always have a number of picks made for this purpose and of free access. When I have filled a case it is carefully nailed up, my name and address is stamped (not written) on each end, also the name and address of the firm to whom I intend to ship. Commission firms will furnish rubber stamps made to order free of charge when a shipper is doing business with them, and they will also send an ink pad free. By the shipper stamping

order. If one brings six quarts he is handed a six-quart ticket which represents money to him, and at any time he wishes his tickets "cashed" I settle with him on the basis of the number of tickets he produces.

Another method is to have a card that is punched each time the picker brings his fruit to the shed, and from the card the employer is able to settle. Certain things are demanded of the pickers, and it is important to see that they live up to these demands. There are very few pickers who will not do as near as they know how what is demanded of them. A little expense is keeping lemonade in the shed for them to drink is money well spent, and especially when the pickers must work all day.

Attractiveness is a very essential feature in getting the best price for fruit of any kind. In many instances it can be safely stated that the appearance—the attractive look to the eye—is of as great importance as the actual worth of the goods. Many consumers are caught more readily by the appearance of the fruit than by the eating quality. The big highly-colored specimen, well packed, is attractive and in many cases will sell more quickly and for more money than something better in quality but poor in appearance.

Attractiveness or beauty is the thing that first makes an impression on many possible purchasers. Some people, especially the well-to-do of the city, buy things they see, not because they want them particularly, but because they "look so nice." This matter of attractiveness may seem a rather small thing, but it is one of the greatest essentials in the successful marketing of any kind of fruit. Its cost is nothing, and as it counts for so much in the most profitable marketing, it should be carefully studied in the packing of each of the various kinds of products and kept in force at all times by every one who has produce to sell.

Fruits or any other kind of farm products should be put up in as good condition as dry goods or notions. They should have a clean, wholesome appearance and should be neat and attractive, either in large or small quantities.

Two Helpful Hints

This May Prove a Blessing in Disguise

Most farmers become irritated when wet days come in the busy season. They had perhaps planned to do a good day's work in the field where the weeds were growing rank to the "choking" out of the crops, or to attend to other work that needed doing badly. In such cases, however, the farmers of more philosophic turn will take the adverse weather as a matter of course, and will either devote the time to reading, or to doing things that need attention indoors. At such times the farmer should look around, get a saw, a hammer and some nails, and get busy. He will then begin to feel that he will be more ready for outdoor work next day when the elements will have cleared up.

Keep the Premises Clean

The premises should be kept scrupulously clean, and more especially so during the warm, or wet seasons. Nothing that makes a disagreeable or repulsive litter should be allowed to remain about the yard or immediate premises. Litter harbors vermin—and what if there be germs of disease hiding in it! All scraps, cuttings, rinds, leaves, etc., should be relegated away beyond the backyard. And while you are doing this, think if it would not be well to stop throwing the wash-water out through the kitchen door.—Frank Beverly.



THE STRAWBERRY, QUEEN OF SMALL FRUITS.

his own name and address and that of the firm, it gives the package a better appearance than when written, and there will be no mistake made in remitting.

As each case is filled it is put in a cool place, in which it is kept till a load is packed. Then the load is taken to the shipping station at once. I use a canvas cover to protect the berries from the sun while transporting to the depot. My wagon has springs on the bolsters. Where a man has no spring wagon, bolster springs are an absolute necessity, for without them the product, especially if the roads are not good and the fruit has to be taken any distance, will be jammed and made very unrepresentable.

Another point in connection with the work which calls for attention is the method of keeping an account of the quarts or pints of fruit each picker brings to the shed. I use tickets for the purpose, which I have printed to my

Orchard Cover Crops

TECHNICALLY considered a cover crop is a crop grown during the late summer for the protection of the ground during the winter or dormant season in plant life. The term, however, has a much broader significance when considered from the Horticulturist's stand point. The effect of cover crops can be traced by their influence in several directions, as follows: (1) Soil moisture, (2) freezing of the soil, (3) physical condition and (4) chemical condition of the soil. Cover crops are grouped under two general classes, leguminous and non-leguminous. The first by means of the bacteria on the roots, add nitrogen to the soil. The clovers, beans, peas, vetches, etc. belong here. Those of the second class add no nitrogen to the soil, and include all of our grasses, rape, corn, buckwheat etc. The cover crop has much to do with the moisture content of the soil, varying to some extent with the nature of the cover crop and the conditions under which it was grown. All cover crops remove moisture from the soil during the growing season, this fact becomes of great importance in the proper ripening of the wood in the young orchard. Cover crops at certain stages may tend very materially towards the conserving of moisture, this being accomplished in several ways. The ripened crop forming a mulch may prevent evaporation, but by far the greater amount of moisture is conserved through the increased humus content of the soil which the cover crop produces when plowed under.

This same humus is a very important factor in the improvement of the physical condition of the soil. It prevents leaching in the light sandy soils, prevents hardening in the heavy clay soils and hastens the drying out in the spring, thus increasing the length of the cultivating period, a very important factor with many crops.

The improvement in the physical condition of soils is the first step in the improvement of exhausted soils; hence, cover crops (and drainage) are the foundation for the betterment of soil conditions. The cover crop improves the chemical condition by using as plant food for growth certain nitrates and other food elements that would have otherwise been lost by leaching. If the cover crop has been a leguminous one the supply of nitrogen in the soil has been very materially increased. Much work has been done in studying the relation of cover crops to the freezing of the soil during the winter. The Ohio experiment Station has clearly demonstrated in an 18 year old orchard the effect of cover crops protection from frost during the winter period. The one half of the orchard was given clean cultivation during the early part of the growing season and followed by annual cover crop (crimson clover), the other half of the orchard was given clean cultivation throughout the growing season. In the half given clean cultivation through the growing season the injury from cold was much greater than on the cover cropped half, every winter showed severe effects of freezing, in some trees it was branches both small and large while on others it was the whole tree. In the spring the trees (peach) came out with a yellowish sickly foliage while the part protected with a cover crop showed little if any injury from frost and had a remarkably heavy green foliage.

Mr. G. F. Warren, of Cornell, N. Y. on carefully examining the products of 1138 apple orchards of the three leading apple producing counties of the state found an increase in the production of from ten to twenty-five per cent. in the orchards in which annual cover crops were grown in preference to either sod or clean cultivation. On an investigation made by the Ohio Station in orchards of the Lake Erie peach belt it was found that orchards given clean cultivation suffered much greater loss over those orchards having cover crops. Many measurements were taken as to the depth of freezing in the open and covered soils. In the open ground the soil was found frozen to a depth of eighteen inches while in the ground mulched with a cover crop it was frozen but eight inches deep.

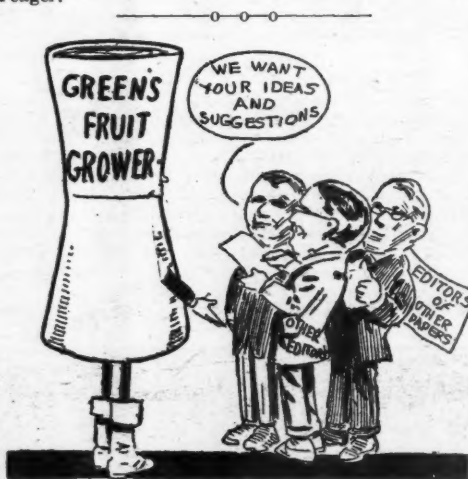
In cover crops as in other crops a rotation is advisable as far as practicable. The Nebraska Station in one of its publications has summed up the requirements of a cover crop for that region and these requirements are so identical with those of this region that I quote them as follows:

"It should start to grow promptly in order to insure an even stand and to choke out weeds." It should grow vigorously in order to insure a heavy winter cover and to dry the ground in the case of late growing trees so as to hasten their maturity." "It should be killed by the early frosts so that it will help to conserve our light fall rains so much needed by the trees in winter. If we should not use a cover crop that lives until late fall frosts, there is even more reason why we should not tolerate a crop that lives over winter and that may not only keep the ground dry in the late fall, but that begins early drying it the following spring." "A cover crop should be heavy enough to furnish as good direct protection as possible against freezing and thawing of the ground, and it should stand sufficiently erect to hold the snow against the power of the strong winds."

"If a cover crop can be found to satisfy the above conditions it will prevent the washing away of the surface soil on all but the steepest of slopes, and by the formation of humus in its decay will improve both the physical and chemical condition of the soil."

"Finally, in the case of poor soils or of old and feeble trees the cover crop should be leguminous one in order that it may add to the supply of nitrogen in the soil and thereby increase the vigor and growth of the trees."

On some of our more improved soils where the less nitrogen exhausting fruits are being grown it is possible to have nitrogen in excess to the extent of over stimulating the growth of the trees and resulting in later injury. Most any of our common field crops will answer as a cover crop. The individual grower must make his own selection after carefully considering the condition of his land, trees and locality. In sections where it will grow I think that we can safely put Crimson clover at the head of the list. Rye makes a heavy growth and does very well for a non legume, the hairy vetch does very satisfactory and can be grown very readily if sown before Aug. 1st, seeding 40 lbs. per acre. In fruiting orchards where a stimulant alone is wanted buckwheat is a very satisfactory crop. The cover crop has undoubtedly taken a permanent place in the judicious management of the young fruit plantation and can make available a good portion of the necessary plant food until the orchard begins to bear fruit, when the application of commercial fertilizers becomes a necessity.—W. G. Yeager.



Yes, other people want the views of Green's Fruit Grower for the reason that they are fresh from the field, the furrow and the garden. Green's Fruit Grower also desires the views of other people. Write us briefly stating your experience in fruit growing.

To Destroy Plant Lice

This is the time of year when rose bushes, golden glows, boxelders, cherry trees and other plants are likely to be infested with lice that sap their vitality and make them unthrifty. These lice are rather easily controlled with simple spray materials, remembering the old adage, "A stitch in time," applies as well to this case.

As these insects all get their living by sucking the sap of the plants upon which they live, it is useless to attempt to kill them by the use of poison, such as Paris green or arsenate of lead put upon the surface of the leaves of the plants. They must be destroyed by the application of a substance that will kill by coming in contact with the exterior of their bodies.

Among the most useful substances for this purpose are: Kerosene emulsion that is about 7 per cent. oil when applied; tobacco decoction made by steeping, a little below the boiling point, one pound of tobacco to each four gallons of water; or one pound of soap (preferably whale oil) to 8 gallons of water. Where it can be obtained, Black Leaf Extract, 1 part in 70 parts of water, or "Black Leaf 40" in proportion of 1 part in 700 of water, is a very effectual spray for all plant lice.

When the plantation is large enough, it is recommended that "ready made mixtures" be obtained, as the proportions are more scientifically balanced.—Alonso L. Rice.—Indiana

Orchard Hints

Written for Green's Fruit Grower by
ARTHUR C. MELVIN

When picking fruit remove at once to a cool place. Leaving in the sun destroys its good appearance and keeping qualities. Never pack wet fruit.

Thoroughly clean the spraying outfit and pack away where it will be safe from harm until wanted another season. Put any poisonous materials that may have been left where the little folks cannot possibly get hold of them.

It is hard work to make the farmer who is not strictly up to date believe that it is not a waste of money to thin fruit. Picking half grown fruit is not to his liking. Yet it is the proper way to get more fruit and better quality.

The fruit grower must be ready to harvest when his crops are ready to sell. If they cannot be sold at a good profit have them put into cans for future use. A single quart need not be wasted.

The leading stationers are selling gummed stickers, all printed with names of various fruit and pickles for labeling the jellies and canned goods in the home. Besides being attractive they save the housewife lots of time, and are well worth the small price asked for them.

Good Profit In Fruit

Written for Green's Fruit Grower by
F. H. SWEET

PROFITABLE fruit growing offers just as many if not more, opportunities of original effort than diversified farming on an extensive scale. To the orchardist who will make as much a study of his trees and their needs as the successful producer of almost anything else there is certain to accrue a goodly measure of success.

A tree planted in an industry started that requires years for its full fruition. Careful calculating is essential at the outset, and it behooves one to mentally diagram just how his farm will be divided, the acreage devoted to each variety of fruit, the rotation of harvest, and sundry other problems that relate to the successful management of a fruit farm. Many of the fruits mature at different times of the season, so that nature seems disposed to assist in a material way to lessen the handicap of a conjunction of harvests with limited laborers.

In my own case while not carrying on fruit growing as a business, the taste and knowledge I acquired on my father's fruit farm as a boy, has kept with me since. My other work only leaves me a few hours a day for digging in the soil; but not a year since I left the old farm has seen me without a quantity of fruits of various sorts, and not a year but has added an appreciable amount to my income. Besides, fruit growing has been a congenial work and the few hours a day from my desk has given far more than its equivalent in good health.

But one must keep on studying. Even when the progressive grower comes to the conclusion that he has learned it all he soon finds out his mistake, or goes back. Those who stand at the very advanced pinnacle in advanced cultural methods are constantly learning new things. The things to hold fast one year become, in part, as the years go on, the things to let go of. The whole scheme of the profitable production of fruit is open to all, with no favored ones except those who study the needs of their trees.

In these days one should not be without the counsel of the farm papers, for more than in any part of the farm journals' past history are their teachings now important to the successful orchardist as well as to the diversified farmer.

Recently a man stopped at the home of a friend in a small village. Being proud of his garden, the owner asked his friend to inspect it, and the friend's attention was soon attracted from the soil crops, which were unusually good, to an adjoining small part of the lot, where were a variety of fruit trees. Here were five or six peach trees, a York Imperial apple tree, well cropped, one Baldwin, a Red Astrachin, a Seckle pear tree, which bore five bushels the year before, a plum tree and a number of grape vines. And all on this small town lot, with still space for a hen yard. Here from a village lot was a fruit yield that more than cared for the taxes, besides furnishing the family with fresh fruit and filling the preserve jars for winter use. To hearty congratulation on his foresight in setting out this fruit years ago, with such admirable judgement, the owner deplored that he still had room for an adult tree, which space was as yet "just hanging round."

Here was a thriving instance where, with a fixed and easily surveyed area, nearly every foot of land was driven to its maximum production. How many, even of the progressive growers, have looked at their broad acres in the same light? They are very few. Each extra tree in production mean extra dollars each bearing year.

The Value of Bees In Fertilization

I do not believe the usefulness of the honey bee in securing a large fruit crop is appreciated as it should be or more fruit growers would see that their orchards are provided with these useful friends. That bees are a great help in securing a good crop of fruit cannot be disputed.

Some seasons the weather conditions are more favorable for fertilization than others, but the bee can be depended upon with more certainty than the weather for carrying the pollen from flower to flower.

Back in the 70's I moved fifty swarms of bees to a new neighborhood. The weather during bloom was ideal, and my nearest neighbor was very much annoyed at the loud humming in his orchards and wanted me to shut the bees in the hives during fruit bloom. I told him I would do so another year if he was not satisfied with the result this year.

Now for the result. Up to that time he had had inferior crops of fruit, but this year he secured more fruit than he had secured in the past ten years.

Another of my neighbors raised red raspberries for a canning factory and was told he grew the largest fruit they received.

I have always observed a marked improvement in fruit within the reach of a good sized bee yard.

Many fruit growers are making the mistake of spraying while in bloom. This kills their best friends, besides being a useless job. It is a positive damage to spray at that time. Don't do it.—F. H. Cyrenius.

In The Fruit of Boyhood

Written for Green's Fruit Grower by C. H. TROTT

A NOTED doctor has said we all eat fewer apples as we grow older,—to our loss. Who doesn't recall the early fall days when he munched the mellow fruit all day and took a pocketful upstairs with him? To look at the orchard of Wellington James, one of Maine's near Apple kings, is to renew boyhood recollections and resolve to "eat an apple a day, to keep doctor away." The trees, planted in even rows, on southeastern slopes, look from the adjoining town of Robbinston, like gigantic potato rows, so drill-like in their regularity have they been set. Their elevation, on a sunny slope, can be admired miles away from this south side. A western orchardist, sampling James' fruit, said, "We have no such flavor in the west."

Like every other progressive, Mr. James never tires of experimenting with a new variety, setting out preferably in the fall, and year-old trees which he says have always given him best results, although he tries spring-planted whips and two-year-olds for novelty. The spring-set trees are prepared for in the autumn, a hole three feet cube or larger being dug and filled with barn manure and richer soil from some other corner of the farm if this plot is poor,—although he intends to have the James apples on ordinarily good apple soil. The orchard is rather high, well drained, ground deep without striking ledges or rocks, where he has avoided the gravelly element to wash away fertility in rains, and minus a too clayey subsoil to chill the roots. Uncommon care is taken with two-year trees, giving plenty room for the roots.

Each tree is tipped slightly toward the bent of the chiefest winds, although the orchard is in a location that does not take the rake of the wind, with a dense wood at the back, west, and partly around to the east. Half the limbs are amputated at planting, and two pounds of a fertilizer containing equal parts sulphate of potash and bone meal are mixed with the soil at roots, to be repeated in larger doses every year. Every year he mulches with stable manure with a good deal of straw bedding in it, and in the fall a forkful of rockweed (seaweed, obtained on nearby salt coast), as he says the salt "sticks the apple on." The elevation, and the protection of the nearby woods, guard against untimely frosts. Too much stable dressing he thinks makes a bearing tree "run to wood," rather than to fruit, and a soil over rich he considers detrimental to the fruit's keeping qualities, although it improves the size and flavor of the apple. On one plot he used wood ashes, working it into the subsoil, but not letting it come in contact with the manure. When a tree lags in growth, he spurs it on with cottonseed meal. In areas likely to wash the fertilizer down the hillside he plows three circles around the tree, one outside the other, and chops down between them, to hold the moisture. He plants a rotation of crops between the trees, making sweet clover the third year and plows it under.

In the fall thinning and pruning is thoroughly done. Dead, worthless, or badly broken limbs and suckers are cut out. Branches split down, if not too far gone, are splintered like a broken leg, and supported from above by wires hung from upper limbs. When a limb is sawed off, he paints the gash with raw linseed oil mixed with white lead.

The proximity of the woods invites ravages from rabbits, rodents, etc. The ashes, heaped around the base of trunk, is some safeguard, as is close-mesh wire. Trunk spraying with lime sulphur has sometimes proved efficacious. Mr. James is laughing yet about a neighbor, years ago when insecticides were just coming into vogue, who feared poisons and tried to scare off pests with torches, and making caps of cotton netting around every tree.

Spring or early summer cultivation, not deep enough to interfere with the roots, is one of the essentials for young trees in the James orchard. Between forty and fifty feet between trunks is his rule for trees of his own planting, although his old orchard, with vigorous trees still loaded at half a century old, interlock branches. Twenty-five feet was considered a good distance apart in his father's day, but a chance for the sun to shine in is the younger James' theory. The color of the apple is deepened by generous sunshine. For this reason, if for no other, Mr. James practices open pruning, and late picking for his fancy fruit. Although he studies constantly through the State bulletins, he believes the needs of individual trees, as well as separate varieties require just as close careful observation and practical testing as do live stock of all kinds. When he plants a yearling tree, its branches are no longer than half a foot, often shorter, and but four of them. The next year all but two new shoots on these limbs are nipped off, and those new branches are deprived of half their summer's growth. By the time the tree is three or four years old the whole top is snipped off flat, and thinned out in the middle, for spraying facility, and to admit the sun when the tree is grown. In dry summers, especially when the trees are

still not well established, he waters them, removing the top soil, and pouring in a pail or two of water, doing the work after the sun is low or down. By the time he has been around the route, with his water barrels, the water has sunk well down among the roots of the first one, and he goes over the whole ground again, replacing the surface earth after the final watering. When the drought continues he repeats the watering every week or two. With very young trees this method seems imperative. The earth would bake and the watering be wasted were it not for his plan of covering the moisture with dry earth. He says that trees with the earth compactly tramped down upon and around them at the planting retain the moisture, whereas any air places dry out quickly and render rain and watering of little avail.

Spraying is practiced five or six times a year, sometimes seven. Limesulphur in winter, limesulphur before the blossoms open, two of arsenate of lead in June and another in July, then one or two of lime sulphur after the crop is harvested.



Each of the above boys has a prize. One possesses a doll, the other cherries. The boy who has the cherries seems to have the better of the boy who has the doll. The boy with the doll is willing to exchange his pet for a few of the cherries, showing the attractiveness of fruit.

Winter pruning, he finds, makes for wood, rather than large apple yields, and injudicious summer pruning lowers the size of harvest. He prunes during two seasons, according to the needs of the particular tree. He understands grafting and budding, and attends to this in person. A few pear trees have place in the orchard both Bartlett's and winter varieties, but he considers pears not worth the bother in this climate, and the short life of the peach and the brevity of the climate dampened his ardor in peaches.

Birds are Mr. James' hobby. He has put up several martin houses in the orchard, and safeguards them with barbed wire tacked on underneath the cotes to daunt cats. During the nesting period he keeps his cats confined, and would annihilate the felines altogether were it not for their hostility toward red squirrels, which he thinks destroy more birds' families than do cats, robbing the nests of eggs. When snow in on the ground,—and particularly when the trees are ice-encrusted,—he takes infinite pains to keep corn meal in trays in a certain bare plot between orchard and house, where he can see that birds eat undisturbed. He has a mean little mongrel watchdog trained to guard those trays from the doorstep, and woe betide any pussy daring to stray that way. Suet is hung from trees and the birds are as tame as hens. As the James premises cultivate little poultry,

skunks are not warred upon, as the owner thinks our odiferous friend a foe to pestiferous grub and bug life.

The Apple Aphides

Plant lice are among the most harmful pests of the apple. During recent years these insects have been very destructive in many orchards in the leading apple-growing sections of New York. The species of aphides which occur on this fruit are the green apple-aphis, the rosy apple-aphis, the European grain-aphis and the woolly apple-aphis, says Gevena, N. Y. Bulletin. The forms most injurious to the foliage and fruit are the green apple-aphis and the rosy apple-aphis. The presence of these species on trees is indicated by curled leaves and the occurrence of a sweetish liquid called "honey dew," which may be observed during the month of June upon the leaves and fruits. The leaves later become blackened and unsightly owing to a "black mold" which grows upon the honey dew. Ants are very fond of this liquid and are often attracted to the infested trees in considerable numbers.

The green aphid is a small, soft-bodied, sucking insect. For a short time after its appearance in the spring the aphid is wingless and of a dark green color. In about two weeks winged forms develop and spread by flight through the orchard. A number of broods are produced during the summer, and females of the last brood deposit minute green eggs about the bases of the buds and in crevices in the bark. These eggs later become shiny black in color, in which condition they remain until hatching takes place in the spring. As the buds begin to expand the eggs hatch and the young lice make their way in large numbers to the green ends of the buds. As opportunity is afforded the insects work into the interior of the buds and seek the protection given by the hairy growth of the unfolding leaves. As the leaves unfold the lice gather on the under surfaces and also on the fruits, causing curling of the leaves and pimpling of the young apples. The extraction of the sap from the fruit stems causes a dwarfing of the young apples, while the injury to the leaves is often a serious drain on the vitality of the trees.

Treatment.—Newly-hatched lice are most susceptible to spraying because of their exposed positions at the tips of the buds. Close watch should be kept for them from the time the tips of the buds show green and during the period when the leaves are expanding. If the insects appear in goodly numbers spray the trees thoroughly with $\frac{1}{2}$ of a pint of "Black Leaf 40" and 3 pounds of soap to 100 gallons of water. It is important to spray early, for if the treatment is delayed the aphids are protected by the curled leaves and they are then practically immune to spraying. The tobacco extracts may be used in combination with lime-sulphur solution or bordeaux mixture, omitting the soap. Some growers combat the apple aphid successfully with kerosene emulsion diluted with 8 parts of water, or whale-oil soap in the proportion of 1 pound to 5 gallons of water. To obtain satisfactory results the spraying mixture should be applied in liberal quantities with high pressure, for only those insects are killed which are completely wetted with the spray.

A great variety of caterpillars feed on apple leaves, but of special importance in most fruit regions in New York are certain species, as the casebearers, bud moth and some leaf rollers.

The Casebearers, Bud Moth and Leaf Rollers

The pistol casebearer and the cigar casebearer are frequently troublesome in apple orchards. The life histories are very similar.

The young caterpillars of the pistol casebearer live over winter in the little pistol-shaped cases of silk which are attached by one end to the twigs, usually near and sometimes on the buds. These cases measure about one-eighth of an inch in length and resemble the bark in color.

Increasing Value of Farms

Editor of Green's Fruit Grower—Right now there is a positive guarantee of riches in agriculture. The American farmer is the real capitalist of today and he will retain that position for many years to come. On the other hand we find millions of human beings who are worried about the living problem and are wondering whether it is best to stay where they are or to move back to the farm. The whole nation is confronted with new conditions—conditions that are without a precedent in the history of the world. Just examine your own case and that examination will prove this statement. Take one commodity alone—potatoes. We imported in 1912 over \$60,000,000 worth of potatoes. This year we will import none; but we will export many millions of dollars worth of potatoes and many millions of dollars worth of other foodstuffs—Reporter.

The Sunny Side of Farm Life

Written for Green's Fruit Grower by
MRS. BELLE M. PATTERSON

IT is all too true that many of the city dwellers, especially the working class, have a warped opinion of farm life.

True they enjoy the fruit and other produce brought in from the country, and much prefer to be able to obtain directly from the producer, as it is peddled from the wagon to the houses of the consumer.

As the housewife opens the kitchen door she is confronted by a man who she rightly judges is direct from the country. Not that he is stamped farmer by any unpleasantness about him, but she notes at a glance the brown toilworn hands, the face tanned and rugged, and knows as he quietly and respectfully enumerates the list of fruits, vegetables, dairy and poultry products, that he is much different in appearance, from the brisk, noisy, palefaced grocery delivery man, for whom she had first mistaken him.

The city housewife must be careful in buying both as to quality and quantity, she knows that every cent must be used to the best advantage, for the weekly income is none too large to make 'both ends meet,' therefore she buys, when possible, direct from the producer. After carefully selecting and paying for what she has bought of the farmer, she stands a moment thoughtfully watching him as he climbs upon the high seat above his load.

"Oh! how many days of toil that load represents," she thinks. "How many mornings of four o'clock rising, how many hours in the hot sun and dust, then the long drive to the city, selling a little here and there, gathering in the dimes and quarters, which he, it seems to me, has earned twofold times and more."

She steps back into her cool, clean kitchen, thankful that her husband works in a factory and is not a farmer, and that perhaps at this time she is not toiling in the garden or berry patch.

There are all too many just such deluded, short-sighted men and women, especially the women who prefer city to country life.

Many of the laborers in the mills and factories, as well as business men and clerks have spent the early years of their life upon the farm, and time cannot efface from their memory the pleasant pictures of those care-free days.

It has recently been demonstrated in this city that there is no need of so many idle men. The financial stress had become so great, so many men were out of work, their families being cared for by the city, that the City Civic League devised a plan to bring the would-be employer and employee together by advertising and other methods. The result was that many farmers came forward with open positions for men and their families. But only a few out of the many idle men accepted these positions. It was not the kind of work they wanted, their wives didn't like the country, were some of the reasons given.

One man said his wife could not leave the advantages (?) of the city, she could not so easily attend the moving picture show. These are facts, for it happened under the writer's observation in her own city this winter.

These people who are enslaved by the frivolous, cheap pleasures to be had in the city, are either blinded by ignorance, or are grown-up delinquents, and as such are unfit for the sturdy honest life upon the farm. They are blind to the fact that the farmer's wife has an independent income, all her own, which gives a freedom that she (the city laborer's wife) knows nothing of. The poultry yard is a veritable mine of dollars, or should be, a near-by vegetable and fruit garden in an enclosure safe from the fowls is a source of joy to the farmers wife and family all the summer through, as her table is filled with dainties from the garden, eggs and rare tender chicken from the poultry yard, cream and butter from the dairy.

Instead of feeling it an irksome duty to care for her little outdoor domain, it is at all times a healthful pleasure.

Rightly planned the farm housewives work need not be a burden. True there are hurried times for a few weeks but as with enthusiasm she begins the fascinating work of filling her fruit closets, and of laying by the dainties for the long restful winter, the thought never enters her mind that she is overworked, as indeed she need not be if all is properly planned.

The city laborer is perhaps ignorant of the fact that the farmer is more than recompensed for the summer's toil by the income received thereby. He does not know that the load of fruit and vegetables which his wife was speculating upon brought the farmer more money than his wages for a fortnight brings him. He does not take into consideration the many half day vacations the farmer has, which would cost him the sacrifice of luxuries in his home or on his table.

The family is more united, being more together, for as the winter with its short days and long evenings advances, they are thrown together more closely, and, while they have not the nickel show at their door, they have a far better way of passing the time pleasantly and the enjoyment of fellowship with one another, with books, music and games, many times shared by friends and neighbors, is amusement not found in the show-house, as both the physical and mental is recuperated, nature brings them to spring time with health and ambition, ready for all duties before them.

Farmers Institutes are doing much to change the erroneous impressions by which many are swayed. The

isolation of farmers is a thing of the past. The telephone, rural delivery, interurbans, as well as automobiles, are all serving to link the country with the advantages of the city, besides the own natural ones it already possesses.

My advice to the struggling city workmen, of whom there is usually a surplus, is "get into the country with the first opportunity offered and stick to it, and you will be a long way ahead in five years. You will then look back upon the old, pinching, planning times in the city as a very bad dream."

Hail to the Raspberry

I have found the raspberry to be one of the kings of fruits. 2500 hills of Cumberland raspberries last year yielded at our fruit farm 2700 baskets, which averaged 11 cents a basket in the Newark market, which made me a return of \$3.050. I have tried many other varieties but find the Cumberland is the best I have ever had on my farm. C. A. Green recommended this variety to me and I thank him very much, for it is great.

Raspberries should be set both ways for good results, 4 x 7 ft. in rows, cultivated both ways the first year often; the second year, both ways once, and then the 7 ft. way the rest of the season till the crop is harvested once a week to hold moisture. Do not set raspberry plants until the ground is good and warm and the plants get three to four inches high.

Many times we have set plants when the ground was cold and the plants could not start, for the ground often bakes thereafter and the roots will rot.

We put stakes to all of our berry hills, which makes it much easier to cultivate and to pick the fruit. By so doing we get a good return the second year. Where stakes are not used one does not get as many berries the second year. By using stakes the yield is doubled.

I am a subscriber to Green's Fruit Grower and would like to hear the raspberry praised more through its columns.—C. A. Flowers, Ohio. Note. We do not stake the raspberry at Green's Fruit Farm—C. A. Green.



A Lover of Animals

Kind Old Gentleman—What a delightful little pet! I have always a soft heart for animals.—London Punch.

The Why of Tillage

A much used and good definition of tillage is that "Tillage is the stirring of the soil for the direct purpose of making plants thrive."—says Prof. T. H. Mc Halton in Southern Ruralist.

If you ask the ordinary man why he tills his fields he will likely answer that he tills to prepare the land for planting and to kill the weeds. If the ground did not need breaking to make it ready for the seeds, little plowing would be done; in fact, we all know many farmers who only break out the row in which the seeds are to be prepared when it becomes necessary to kill weeds.

It has been argued by some that tillage was an unnatural process and, therefore, should be practiced as little as possible. They go to the woods to find the proof of their statements. They point to the trees of the forest and call attention to the fact that no plowing or tilling has been done there. All of this is true, but they fail to note the mat of leaves that protects the ground and also fail to note the difference between the crop of the forest, which is wood, and the crop of the orchard, which is fruit. If the orchardist desires to grow apple-wood he can do no better than to follow the methods of the forest, but if he expects to grow fruit, then he must get away from such methods. Nature's sole object in growing plants is the reproduction of the species, while man's is for food and fruits. The seed from the little runty, forest-grown peach will sprout, probably into a healthier tree than the seed from the pampered orchard tree, but we are not growing fruit for seed, but for the flesh, a part that nature cares little for.

In all likelihood, the beginnings of tillage were with primal man. Certain plants of the woods furnished food for him and when he tarried long in one place these plants became scarce; he then picked out an open space or cleared a bit of land and planted these desirable plants near his habitation. The first work was to make holes in the ground for planting. He likely did this with a stick or stone. Then the weeds came along and almost took his crop, which forced him to pull them out; and at the end of the season harvesting required the stirring of the ground to gather the crop. The next year he planted in the same place and found the ground easier to work and the weeds and brush less troublesome. In time his patch became known as tame ground and thus was tillage established.

The Black Cap Raspberry

Editor Green's Fruit Grower—One of the easily grown and most satisfactory small fruits is the blackcap raspberry. The plants do not sucker, like the reds, and are confined to the original rows without difficulty. All that is necessary is to keep the number of canes growing from each crown limited to a half dozen or even less. A satisfactory method is to grow the fruit, not in hills but continuously, spacing the plants about one foot apart. The canes do not grow so large and are more easily handled. If given wide space in the rows and heavily fertilized, in the hill system, with the hills from three to four feet apart, the cane growth is likely to be abnormal. In winter this works great havoc as the heavy canes break more readily than the smaller sized ones. As a method of pruning I cannot say that the pinching back process is a success. It produces a whiplash effect to the plant that is neither pleasing or satisfactory, every lateral bud near the point where the vine is pinched back trying to outdo its fellows in the matter of growth. Instead of one vine to contend with, the caretaker has from 10 to 20. I prefer the method of allowing the cane to grow at will during the summer and fall, cutting back to the desired height early in the spring. Such treatment never fails to produce a bushy and ample fruit-bearing surface.

The season isn't too far advanced for one to start a row of blackcaps along the garden side if fruit is wanted next season. The plants will not produce a full crop, that is sure, but will give some fine fruit, enough to pay one for the trouble of planting. The next year they will yield an average crop. The cultural methods are simple and easily understood, any fruit catalogue giving sufficient directions to start anyone on the road to success with this desirable fruit. The plant has few enemies insect or fungus, and is sure cropper, year after year.

The ease with which the blackcap can be transplanted was demonstrated by the writer last season. Plants, numbering several hundred, were found growing along rows of Cumberland. The original vines had trailed between the rows and taken root, forming fine plants about two feet in height. Though the spring season was well advanced, the plants were lifted and re-set in a hedge row, to act as a division line between two lots. They continued to grow without interruption and by fall had formed a most attractive hedge that will be even more beautiful this season. Few fruits will attract more attention than a well kept row of black raspberries during either the blossoming or fruiting periods.

For an all-round blackcap the Cumberland has no superior. The Souhegan is earlier and a most delicious and productive berry it is, though not so large as the Cumberland. The size of the Souhegan decreases as the season advances and other varieties then make better returns. But for an early berry it is valuable. The only fault to be found with the Gregg, in the higher altitudes where the thermometer drops much below zero, is that it winter-kills somewhat. It is a beautiful berry with its attractive color and powdery coating. Plum Farmer and Kansas are excellent sorts. Any of the listed varieties, if given even ordinary care, cultivation and fertilization, will yield satisfactory returns.—V. King Pifer, Pa.

Summer Spray for Apple Worm

Many fruit growers spray their trees carefully just after the blossoms fall in an attempt to control the apple worm. There is no question but that this is one of the most important sprays of the year in combating this worm. However, suggests R. B. Cruickshank of the College of Agriculture, Ohio State University, it should be supplemented by at least one spray in the summer. The codling moth which is the parent or adult of the apple worm has two generations in Ohio. The second brood makes its appearance about the first week in July. These worms do an immense amount of injury and should be fought. Arsenate of lead used at the rate of about three pounds to 50 gallons of water or Bordeaux mixture is the material used for this pest. It will aid in stopping the ravages of the curculio and the various caterpillars which are bothersome in July. Where bitter rot or Arkansas Blotch is present, Bordeaux mixture spray should be used, the two being applied at the same time.

Cherries and Mulberries

Charles A. Green, Dear Sir: In the March Fruit Grower Prof. Van Deman in answering a question says: "Cultivated grafts or buds of cherry trees will not grow on wild trees." Three years ago I dug up a number of little wild cherry trees and set them in my nursery. After they had grown there a year I grafted one of them with a Napoleon graft, and it grew, and is now nearly five feet high and doing finely.

In the same number you write of your Russian Mulberry tree. That tree is much more valuable than you think. We have one that bears bushels of fruit each year. Finding that when stewed it lacked body we added enough gooseberries to make the flavor perfect, and there is no canned fruit that comes on our table that is finer. To save time in picking them we spread a sheet on the ground and shake the branches that are above it and in a few minutes we have a bucketful. Try them our way and it will make your mouth water for them ever after. They are fine for the birds, but just as fine for folks.—Homer J. Smith, Del.

A New Call to Farmers

Written for Green's Fruit Grower by
GEORGE FRANK LORD

TWENTY years ago men were predicting that the amount of farming land would be decreased. Cities were growing fast and it looked for a while as if the grain fields would be supplanted by the noisy factories of the city. On the contrary, however, there is now more cultivable land than there was at that time, and the amount is steadily increasing. The reason for this can be traced almost directly to new and improved methods of farming. Machinists, chemists and scientists have done much for agriculture in late years. Soils which were considered useless not many years ago may now be made most valuable.

By means of high explosives swampy lands may be drained, and cut-over lands cleared very quickly and cheaply. The result is a new soil, which is the more productive and fertile since it has never been cultivated. By the use of chemicals soils may be adapted to their crops. Even the kinds and durations of seasons may be partially determined, for our weather bureau is becoming more and more efficient in that respect. It has been said that there is no other calling where success is so sure as it is in farming, while in pursuits of traffic ninety-five men fail where five succeed.

Farmers as Financiers

The European war has emphasized the importance of farmers in the financial affairs of the world.

First, when many lines of business are greatly depressed by the conditions in Europe, the growers of food spring into prominence as the one class of individuals who are making more money than usual.

Second, the business and financial world has suddenly discovered that the much wanted return of prosperity to the country depends largely on the farmer. His shipments and purchases are expected to start things on the upward trend.

And finally, it seems that the easiest if not the only way to correct the world's balance sheet by offsetting the enormous destruction of wealth now going on in Europe, is to increase agricultural production. And that simmers down to America, because the farmers of Europe are now bearing arms, and those of South America, Australia, etc., have no means of exporting their crops.

The greatest increase must come by putting every possible acre to work. The millions of acres of reclaimable swamp and stump land, once under cultivation, would rapidly produce all the wealth needed to offset the European war destruction. And until this is offset, enduring prosperity here or anywhere else will be impossible.

Home Markets For Garden Fruits

Writing from my own experience and observations I know that many farmers could profitably grow more fruit for market. I know that many who have the help needed to care for the orchard or the small fruit plantation are not planting fruits or giving those they have right treatment, because living in a small town, perhaps, they believe that transportation charges to cities, and commission charges, would leave no profit to the producer, says W. H. Jenkins, in Rural Life. I want to tell those in the country who desire to grow fruit for market about the market they may have that is close to them.

Will my readers who live in a country village, in a suburban neighborhood or on a farm call to mind how many of their neighbors or townsmen grow the different fruits in their season? I think they will find but a small per cent. Then let them consider whether the average of these have not as much money to spend for fruit as the average in the city, also that the nearer the customer is to the grower the better may be the condition of the fruit when it reaches him. The facts of the case as I know them in my own locality, which is the best farming country in New York, is that not more than 10 per cent. of those who have suitable land or fruits grow strawberries and other small fruits for family use, and generally the only orchard fruits are inferior apples from old orchards that have received no attention. I recall a trip through one country which has made such progress in scientific dairy farming that it is unequalled in the world in the production, per cow, of dairy products and profits made, yet these farmers, who often keep the 10,000 pound cow, almost go without fruit because they think they have no time to grow it, and no good fruit is offered them by local growers.

To prove the foregoing, statements about the markets that most people do not realize that they have for fine home-grown fruits, I will tell my experience in growing strawberries in a country village. For many years I have grown a field of strawberries for market, and usually the large high flavored varieties, and left them on the plants until they were ripe so as to bring out the true luscious flavor of the berry. When ready for market, all I have had to do is to let people know I have them, and every year they come to my place and take them and pay a good price. Not only our village people want the berries, but farmers around want them. Proprietors of the village markets, who send their wagons out in the country, always bring me orders for berries every year, more than I can fill. These farmers neglect the family fruit and vegetable garden, and tiring of the meat, potato and bread diet, are hungry for the first

strawberries, and some, if they were offered them, would buy fresh berries regularly in their season, and a crate to can. Nearly all of our village people have a vegetable garden in which they could easily grow small fruits, but only a few grow them. These neighbors sometimes plant the fruit and then give them no care, or they have not learned their right culture, and so are my customers.

The most of the other fruits can be sold in their season in village and rural localities, but probably not in as large quantities as strawberries. One fruit immediately following strawberries that would be in large demand, is cherries. I have seen home grown cherries sell in a village market in considerable quantities at twelve cents per quart. Currants, raspberries, and blackberries are succession crops that can be made to pay fairly well. Good plums have always sold well, but eternal vigilance is required to grow them. Generally I would not consider it a good proposition to grow apples and pears for market, unless I grew such quantities as to load cars for shipment to cities. On a fruit farm it would be well to include some apples for a village market, but the sales would be quite limited, as there are apple trees on many village lots.

I can write from experience about caring for a small vineyard, and know good grapes can be ripened in Delaware county, New York, outside of the grape belt, and that hundreds of dollars' worth could be sold in our small village. From the writer's point of view to grow more fruit and educate the people to want it so less animal foods are eaten, is a good work to do, so let us grow more and better fruit.



The old way in fruit growing was to throw away the culled fruits. The new way is to make use of all the fruit grown upon the tree, which is done by making cider or vinegar, apple butter, marmalades, grape juice, jellies and evaporated fruit.

The Grape Root Worm

There is an insect pest which appears in the great grape region. An examination of the leaves of the affected vines will give a clue to the depredator, says "Pennsylvania Farmer." You will find irregular, narrow, chain-like holes have been eaten in the leaves. It is the work of the beetle of the grape root worm, and if you look around the roots of the affected vines you will find many of the small white grubs at work on the roots. This insect is capable of doing much damage in a vineyard, as Ohio grape growers can testify after several years of sad and costly experience with it.

Usually, far more injury is done by the insect in its grub or larval stage than by the beetles. But as the grubs are small, and work on the roots underground, the vineyardist unfamiliar with the insect and its work would not suspect their presence, even tho his vines began to decline and finally died. A large majority of the grubs are to be found near or directly beneath the point where the large roots leave the trunk.

When the grubs get full grown in early autumn, they work their way a little to one side of the root and form little earthen cells, within which they remain curled up without food during the winter and until the following June, thus spending about nine months in this manner.

The beetles begin to appear during the last of June, and soon begin their injurious work on the leaves. They mate soon after emerging. Most of the beetles die by August, but some that emerged late may be found on the vines as late as September.

As the beetles feed openly on the upper surface of the leaves, one can easily feed them poison with a spray pump, but many vineyardists report only fair success in efforts to poison the beetles. It requires a strong dose of poison to kill the beetles quickly enough. The application should be made as early as the 25th of June, and not later than July 15th. The arsenate of lead, altho more expensive, is to be recommended in preference to other poisons, as it will stick on the foliage much longer, and there is not the danger of burning the leaves with a strong mixture that there would be from using paris green and similar poisons. Use two or three pounds of arsenate in 150 gallons of water.

The eggs of the insect can be killed with kerosene emulsion, but only a comparatively few eggs on a vine can be reached with a spray, they are so snugly tucked under the bark.

The grape growers should not fail to familiarize themselves with the pictures and descriptions of this pest and its work, as it is one of the most serious enemies that have yet threatened the industry in this country.

The Clayback Cutworm

Preventative measures are best for the common clayback cutworm. If the wheat fields are plowed during the summer and the volunteer wheat is kept down until after seeding, there is very little danger. Cutworms often migrate from field to field, in which case a good dust barrier should be constructed in which the worms may be destroyed. Where the worms are migrating or are concentrated in a small area, they can probably be killed by using the poison bran mash employed against grasshoppers. This should be sown in the evening along the edge of the field that the worms are entering.

Rather a New Experiment

In several sections the culture of sunflowers is being added to the diversified crops of farmers. In one county nearly 3,000 acres were planted in sunflowers the past year. This crop, which brings between \$60 and \$90 an acre, pays very well for the land and tillage.

The cultivation of sunflowers is the same as that of corn, and the seed are thrashed much like wheat. The plants grow from eight to ten feet in height, and the harvesters go through the fields in wagons, cutting off the pods, which are placed in barns to be thrashed when there is little farm work to be done. Single pods yield as much as a peck of seed.

Limited Popularity

Moody people generally enjoy a limited popularity. There are some people who meet you to-day and are so friendly and jolly that you are irresistibly drawn to them, and look forward to the next meeting. And when that meeting takes place they are curt and cold, and as unlike your agreeable memory as day is unlike night. This does not mean that they have heard something about you not to your advantage, though that is the first explanation that rushes to your bewildered mind. It means only that they are not in the mood for meeting you with friendly affability. And if ever again you come across them when they are disposed to make themselves agreeable, their advances fall on stony soil so far as you are concerned.

There is something delightful about the person who is always the same, whose friendly interest manifested one day is typical of what you may expect if you should meet him or her a score of times, and each time under circumstances entirely different. The moody people, who today have a smile for you, and a blank stare tomorrow, very soon teach you to value their affability as little as their coldness.

What You Don't Like

People who form the habit of doing only what they like, are continually coming up against obstacles that seem insurmountable. For in addition to the difficulty that must be grappled with, they must tackle the sense of reluctance, which so long has been accustomed to have everything its own way. And as a rule when the last-named difficulty is conquered, the other victory is easy.

Do not put yourself at such a disadvantage as to suppose that you cannot do what you do not feel like doing. Not only can you do it, but you can do it well. You can master reluctances and disinclinations so thoroughly as to make a splendid success of what you undertake. And in overcoming your impression that you must fail unless your liking is enlisted, you have won a victory that in itself is no small triumph.—E. H. Sweet.

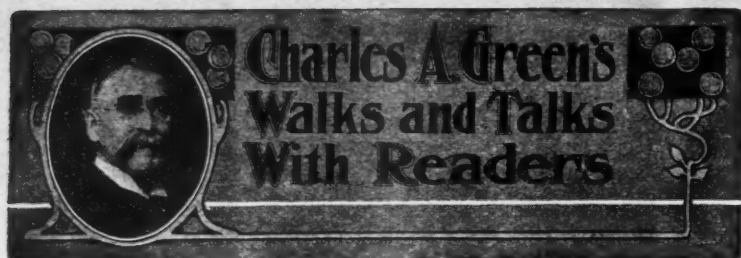
The Thinning of Fruit

The early part of July is a good time to do thinning in apple and peach orchards. Few growers who have tried thinning and seen its results are willing to grow a crop without making this a part of the work. The chief object in view is to secure the largest amount of first quality fruit. Other considerations are the relief of overburdened limbs which might break from overweight, and a reduction of the strain upon the tree which maturing too large a crop would bring. In the first place, all fruits imperfect because of insect, disease or physical injury are removed. Then, specimens that are in clusters or close enough to touch should be thinned off. When choice is allowed, those fruits which are most nearly uniform in shape and dominant in size should, of course, be allowed to remain. The indefinite part of the practice of thinning is the total amount of fruit to be removed. Here is where the thinner's judgment must be displayed. He will have to take into consideration the kind of fruit, the number of specimens on the tree, the size he desires together with the strength of the soil and the probable rainfall. While some men thin apples and peaches to four, six, eight and even ten inches apart, yet it is better to adopt an elastic system which includes a consideration of immediate conditions.

Good Short Story

A farmer in the country last autumn gave a job to a seedy-looking individual who had applied to him, and who assured him that he never got tired. When the employer went to the field where he had put the tramp to work, he found the latter lolling on his back under a tree.

"What does this mean?" asked the employer. "I thought you were a man who never got tired?" "I don't," calmly responded the tramp. "This doesn't tire me."—Sacred Heart Review.



Work of Sparrows

Before the window of the office of Green's Fruit Grower the Virginia creeper has entwined itself with the meshes of the mosquito netting. Two sparrows have just alighted on this vine. They have looked the vine over carefully for insects. Apparently they have found only five or six bugs. These they have devoured. After looking the vine over carefully the birds move on to other fields and fresh pastures.

Bird Census

The United States Government is taking a census of the wild birds of this country and desires the assistance of those who are interested in birds. If you will report to the United States Department of Agriculture, Washington, D. C., care of Wells W. Cooke, how many birds you have seen upon your place and how many acres your place contains, you will aid this worthy cause. The great service of birds is being better appreciated each year. It is understood that man would not exist on the earth if the birds were destroyed, owing to the rapid increase of insects.

Herein I give a report of the birds seen near the home of the editor of Green's Fruit Grower at Rochester, N. Y., by a young man who is now superintendent of Highland park near the office of Green's Fruit Grower, and who was formerly in the employ of Green's Fruit Grower:

A census of a portion of Highland park (about 75 acres) gave the following results: 127 pairs of nesting birds, divided as follows:—song sparrow, 30 pairs; robin, 22 pairs; catbird, 14 pairs; goldfinch, 11 pairs; yellow warbler, 10 pairs; chipping sparrow, 10 pairs; brown thrasher, 7 pairs; wood thrush, 4 pairs; northern flicker, 3 pairs; wood pewee, 3 pairs; Baltimore oriole, 2 pairs; cowbird, 2 pairs; kingbird, 2 pairs; hummingbird, 1 pair; cedar waxing, 1 pair; redbird, 1 pair; towhee, 1 pair; purple finch, 1 pair; barn swallow, 1 pair; meadow lark, 1 pair; these are all native birds. One pair of the introduced pheasant also nested within the park.

Happy Days

In recalling happy days how natural it is to look back to childhood. In doing this I recall the happy hours spent as a boy in the cherry trees at the Fourth of July season, when I could eat cherries almost to suffocation without serious results. I recall also the luscious plums, peaches and apples that seemed to help make childhood days happy. I recall my associations with neighboring boys, my hunting and fishing excursions, and the gathering of wild fruits such as the nuckleberry, blackberry and strawberry.

But when I reflect with more consideration I find that these childhood days were not the happiest days of my life. Then I ask myself, were the days of achievement my happiest days? My father and mother have said that they were never so happy as when they were straining every nerve to pay for the farm which they had purchased in the early years of their married life. Surely the assurance of financial success, of the realization of reward for our efforts, our struggles, tends to make happy days, but even these cannot be considered the happiest days of life.

Most people will tell you that youth is the happiest period, but I am inclined to doubt that this is true. Perhaps it is well to conclude that every day is the happiest day and every period of life the happiest period. Certainly old age is full of happiness to those who have accumulated a surplus and are able to promote worthy objects and relieve the wants of needy people.

The Baby Bird

Last evening at dusk I saw a helpless little robin sitting on the steps near my kitchen door. This was a perilous position, for the locality was often visited by the family cat, which fattens on helpless

birds. I found that this little robin could do nothing but open its mouth. It could neither fly nor use its legs successfully in running. I endeavored to make the bird hold itself in a tree or bush, but without success at the beginning. Soon the little fellow began to cry. This brought the father and mother birds who circled closely around my head with threatening shrieks.

I debated whether to put the baby bird into a cage or whether to catch the cat and put the cat into a cage, but at that hour I had an engagement which I had to attend to, therefore I had not time to hunt up cages either for the cat or the bird. After several attempts I finally induced the baby bird to hold on to a twig in the low growing but densely branched top of a golden willow tree. Here the mother and father birds found their baby and its life was preserved for at least a short season.

By this incident you see the helplessness of birds in the presence of the family cat, which destroys on an average from fifty to a hundred birds every year. Cats can climb the trees and carry off the young birds. If the birds fall from the nest by accident a cat grabs them with its sharp claws and devours them. During heavy showers birds sometimes become helpless and fall easy prey to cats. Cats are not the only enemies of birds. The red squirrel and the crow destroy as many birds as the cat and there are the mischievous boys who carry off the eggs or break up the nests, and when the birds go south they are shot and eaten by hundreds and thousands. It is surprising that there are so many birds left when we consider all of the enemies which they meet.

A Legal Question About Eggs

A neighbor's hens came to my city home grounds each morning as regularly as the sun shone. They seemed to delight in the shrubbery, the insects and other food they could pick up on my place. I found a nest containing eighteen eggs which these hens had laid on my grounds. Knowing that the hens belonged to a neighbor who lived about an eighth of a mile distant, I sent the eggs to his house, for which he seemed thankful. I did not raise the question of whether the eggs were legally my neighbor's. It seemed to me proper that he should have the eggs. Recently I saw a decision of the Court, which is that eggs laid by neighbor's hens on other neighbor's property cannot be claimed by the owners of the hens. Notwithstanding this legal decision I shall continue to return to my neighbor the eggs which his hens have laid upon my place.

Whistling for Health

I am the only survivor of a family of seven children. My opinion is that whistling has done much toward the preservation of my health and life. My family was consumptive, my relatives both near and distant having died with consumption. Years ago I was examined for life insurance and rejected on account of disposed taint of tuberculosis in my family though I was pronounced sound personally.

From childhood I have been a whistler. I do not whistle from choice. I whistle from habit. Whistling is a method of expression with me. I mean by this if I am sad, as I was this morning, since a member of my family was to be operated upon in the hospital, I found myself whistling "The Holy City," a very sad tune. When I feel particularly joyful I whistle some very lively tune without being conscious in either case what I am doing. I was once charged with having whistled in church during an eloquent sermon, but I have doubted the truth of this assertion. If I did whistle on that occasion it must have been a very soft-toned whistle.

It has long been known that the exercise received by a cornet, flute or other wind instrument has a strong tendency to

exercise the lungs and expand the chest. I have found whistling to produce similar results. In whistling the breath is more largely expelled from the lungs, compelling a deep inspiration of fresh air, which aids in developing deep breathing. One naturally takes a breath before the whistling and a deep breath after.

My wife and family tell me that they like to hear me whistling, as I am continually doing when about the house or in the garden or yard.

The Showman

There are few things that appealed to me in childhood as did the showman. It seemed to me that it must be a great thing to be the manager of some kind of a show. While I was attending school at Lima, N. Y., Seminary, soon after the Civil War, a show, consisting of a panorama, was given in the public hall. Of late years we do not have such traveling shows. This entertainment consisted, as the showman announced, of marvelous paintings upon canvases stretched between rollers, so that the scene was continually changing from one thing to another. Now the scene would be that of a peaceful farm, then following would occur a fierce battle upon the same farm, and again the return of victorious soldiers. I do not doubt that these works of art were in fact miserable daubs by an incompetent artist, but the audiences of those early days were not critical, therefore the exhibition was largely attended.

In a moment of exaltation the showman, who managed every department of his entertainment, announced that, in this one particular painting of soldiers on the march, frequently women in the audience recognized members of their family in the men in uniform and often cried out hysterically: "It is he! It is he!"

If so slight a sensation as the above should exercise my admiration as a boy, you can imagine how much greater was my enthusiasm for the manager of a circus or a menagerie, as the circus was called in those days, provided a few animals could be attached to the moving caravan.

I have discovered late in life that it requires peculiar ability to be a successful showman and that there are few enterprises more uncertain or risky than shows of various kinds from those given in tents in the country to amphitheaters or hippodromes. I would much rather be the owner and manager of a little farm than to be the proprietor of a big circus.

What Is Wrong with Farming?

While I realize that there are many good farmers owning farms that are well managed, I cannot be blind to the fact that a large proportion of the farms of the United States are mismanaged and do not yield the profit they should. The question arises, What is wrong with these mismanaged farms?

Since farming is a business, a progressive farmer should be a good business man, but there are few farmers who have had any kind of business training, therefore if they succeed in making themselves good business men it results largely from natural ability, meaning by this that they are by nature good salesmen and good managers, but even these men would have been more successful if they had had a business training.

I have recently spent several hours in looking over the buildings and over each field of a 200 acre farm, well located within 15 miles of the city of Rochester, N. Y., where there is a good market for all kinds of farm produce.

Realizing as I do that there is always something to be done to any farm, no matter how good its condition may be, in order to keep it from declining in value and productiveness, this farm impressed me with the fact that nothing had been done for a long series of years toward making this land productive and profitable. The only repair I saw was the covering of the run down barns and the dwelling with tar and gravel paper, which was absolutely necessary in order to house the crops and the family.

The fences were in ruins, the open ditches were blocked, permitting the water to spread over the fields, many of the fields had large rocks partly buried in the soil, thus impeding plowing or cultivating, and the surface of the soil was covered with loose stones that should have been removed many years ago. I could not see that any tile drainage had been given. Fruit tree planting had been neglected.

The soil was naturally fertile and still yielded good crops when proper cultivation was given. The buildings were located at one end of the farm, making it necessary to travel the larger part of a mile in order to reach the further extremity which resulted in a waste of time in going and coming and in hauling out manure and in drawing hay and other crops from distant fields. A farm located like this should have barns at the extreme end (or midway) so as to avoid so much hauling.

A man doing business in a city feels the necessity of continually doing something to improve his plant. He is constantly adopting reforms and reviewing his system and improving it, but on this farm nothing of this kind seems to have been done. The proprietor would seem to have been exercised only in getting all the revenue he could from the farm with the least expenditure of thought or plan or money in building up or sustaining the productiveness of the various fields and the welfare of the buildings.

I have often been impressed with the fact that farming must be a good business, as is proved by the fact that under so much bad management the farms still continue to be profitable and productive.

Trees Stung by Locusts

Mr. Charles A. Green:—I am located in the section of country that was infested with the locusts the past season. I have a small orchard two years old. The trees were badly stung and the peach trees are exuding a large amount of gum. Would you advise cutting these trees back to the main trunk, leaving about one foot of the main branches, or shall I just trim them heavily and let them go? What will I do with the apple trees?—James Kerr, Ohio.

Reply: I have had no personal experience with seventeen year locusts. If you head back your peach trees you will make it impossible for them to bear any fruit this year, but peach trees are rather benefited than otherwise by heading back the tops severely or even by dehorning them. The exudation of gum I do not consider very serious. I do not think that the locusts' work on either peach or apple trees will be serious even though no pruning whatever is done, but I could tell better if I had seen the trees.

Orchard Inquiry

Editor Green's Fruit Grower:—Will you kindly answer through the columns of Green's Fruit Grower the following questions:

1. In planting an apple orchard would you advise low heading of trees, and if so, about what height?
2. Would you also advise low heading of pear trees?
3. I have a Thanksgiving prune about 8 years old which has never produced any mature fruit. During July and August all fruit which sets becomes affected with rot and drops. Is there any effectual remedy?

4. Last summer a red beetle which could fly from tree to tree was prevalent doing a vast amount of damage to peach and cherry tree foliage. Partly grown peaches seemed to be stung by them and dropped. Arsenate of lead spray was used but did not seem to check the ravages of this pest. What is the best remedy?—Elbert A. Porter, Pa.

C. A. Green's Reply: 1. I advise low heads for fruit trees, but there is difference of opinion in regard to how low the heads should be for best results. It is desirable to have the heads low as it makes fruit picking, pruning and spraying much more easy. If the trees are headed back to two feet from the ground, some of the branches when laden with fruit would rest on the ground. I think four feet from the ground for the beginning of the head is low enough, but you could not cultivate under these trees when the head is started from two to four feet in height, but no grass or weeds will grow under a large tree thus low headed.

2. Yes, I advise low heading for all kinds of fruit trees.

3. Rotting of plums can be modified by spraying with Bordeaux mixture soon after the fruit sets.

4. I have no experience with this beetle. Anything that feeds upon the foliage can be destroyed by a poison spray using paris green or arsenate of lead.

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Prof. H. E. Van Deman Buried at Arlington

Funeral services for Prof. Henry E. Van Deman, former pomologist of the Department of Agriculture, who died Wednesday evening, were held May 1, 1915, at 2 o'clock at the family residence, 3630 13th street northwest. The interment was in Arlington cemetery. The following appeared in the Washington Daily Sun:

Prof. Van Deman was born at Concord, Ross county, Ohio. His life work was in connection with the fruit interests of the country, and to this work the best years of his life were devoted. He was born and brought up in an atmosphere which was distinctly horticultural in its character. His grandfather planted some of the best orchards in Ohio, and both his father and mother were keenly interested in the growing of fruits and flowers.

It was while preparing for college that he enlisted, in 1863, for service in the civil war, serving in Company A, 1st Ohio Regiment Heavy Artillery. He remained in the army until the close of the war.

Following his return to civil life he resumed his studies and for a time was associated with the late Dr. John A. Warder of North Bend, Ohio, a widely known pomologist.

Following this experience, Prof. Van Deman lived for two years in northern Michigan and later moved to Geneva, Kansas, where some fifteen years of his life were spent. He settled here on a homestead and soon began developing an orchard. During his residence in Kansas he was regarded as a leading factor in influencing the extension of fruit growing in that state during a time in which such efforts were necessarily pioneer work.

ACCEPTS PROFESSORSHIP

In 1878 he accepted a call to the chair of botany and horticulture in the Kansas Agricultural College. This position he held for two years, when he again resumed work on his farm in Geneva.

The more public career of Prof. Van Deman began when in 1884-1885 he was placed in charge of a fruit exhibit from Allen County, Kan., which was made at the world's industrial and cotton centennial exhibition held in New Orleans. While in charge of this county display, he also served as chairman of the committee of awards on the citrus fruits which were placed in competition at this exhibition.

It was during this time that the late Norman J. Coleman was appointed commissioner of agriculture. Mr. Colman was much interested in the development of the fruit interests of the country, and it was early in his administration that the matter of organizing a branch of the Department of Agriculture charged with the work of aiding the fruit interests was suggested to him. Mr. Colman, being intimately acquainted with Prof. Van Deman and recognizing his qualifications for leading in such an undertaking, invited him to organize a division of pomology and on July 1, 1886, appointed him pomologist of the Department of Agriculture.

RETIRED IN JUNE, 1893

Prof. Van Deman continued in charge of the division of pomology until June, 1893, when he retired from that position and has since devoted his time to other activities, all of which have been in connection with fruit interests. The work organized in the Department of Agriculture by Prof. Van Deman is still being continued through the office of horticultural and pomological investigations of the bureau of plant industry.

He devoted much time to editorial work and to writing for fruit journals and other publications which devote space to matters of interest to fruit growers. It was perhaps through the channels of the horticultural press that his influence has been exerted more widely than in any other way. However, for the past twenty years he has been a frequent speaker at horticultural and pomological meetings throughout the country. He was also very widely known as a judge at fruit exhibits. In this capacity he served not only at county, state and national fruit exhibits, but also in connection with several of the international expositions which have been held in this country during the past fifteen or twenty years.

Solving the Help Problem

This question depends on local conditions almost entirely. College students and high school pupils are very often

excellent help. Sometimes they board themselves or sleep in tents, which relieves the trouble and work of the owner. Prices for hired help vary in different localities so that no definite price is fixed. I think the Golden Rule is a very good one to follow in regard to hired help.—H. E. Van Deman.

Strawberry Inquiry

Prof. H. E. Van Deman:—Will fertilizer applied on a strawberry bed, just planted this month, help the bed next year? When and with what solution should strawberries be sprayed? Do you advise letting newly placed plants bear a crop of berries this summer?

I have set out two peach trees and one apple tree this spring which I cut back to whips; there are also on my place 2 trees (peach) which have never been cared for and which will bear this year. Will you kindly tell me when I should spray these trees and what I should use, as I wish to take good care of them? What books do you recommend for study for peach, grape and strawberry culture? I have poultry manure mixed with poultry litter (which is a vegetable substance similar to peat). Will this be satisfactory for fertilizer?—S. R. H. Penna.

Reply:—The fertilizer for strawberry plants should have been applied before

turn brown, curl up and die. Will you please tell me what to do for these pests? The vines are hearty and look well in the spring, but later they wither up and grapes fall off; hardly a single bunch in all my large arbor. We have the vines well trimmed each year and spray in spring with Bordeaux mixture.—Rob Roy, Ohio.

Reply: The little white insects are known as thrip. They are sometimes present in large numbers and yet may not do serious injury. It is difficult to destroy thrip completely by spraying. I have known vines to be approached with large sheets of sticky paper in the hands of an assistant, while another person beats the vines gently, driving out the thrip, which become fastened in the gluey substance and destroyed.

The rustlike spots are fungus which in ordinary cases is not serious. If severely attacked with fungus, the vines should be sprayed with Bordeaux mixture or lime and sulphur.

Cracked Pears

Green's Fruit Grower:—I have a pear tree (standard), Flemish Beauty. The fruit cracks open to the core nearly. The tree is very healthy. Can you give a reason for same? Or do you think it



View of a strawberry field in Lewis county, Idaho, that produced 200 crates of strawberries per acre, 1600 quarts sold at an average of 12½ cents per quart. Photograph from S. B. Onthank.

would be better to graft same?—J. P. Adleman, Pa.

Reply: The cracking of the skin of pears is caused by a fungus which is easily destroyed by spraying the tree with Bordeaux mixture soon after the fruit sets in early summer. I have no trouble with pears cracking at Green's Fruit Farm. There has been more trouble in past years with cracking than at present.

Those Old Boots

Editor Green's Fruit Grower:—Mr. Green's remarks on "Boots" in February issue of Green's Fruit Grower remind me of my first pair of boots, made for me by my grandfather (about 60 years ago), the late Joseph Willard, who was a noted hotel man in his day, and a direct descendant of Simon Willard, the first Governor-General of the state of Massachusetts and the founder of the town of Concord, Mass.

These boots were a very fancy pair with bright red tops and were sent to me for a Christmas present. They were beauties and I was very proud of them. I was the envy of every other boy in town. Every boy in those days wore boots, many of them made from thick cow's hide.

It was the practice to grease the boots every Sunday morning with tallow. All the short ends of tallow candles were put

into an iron dish and a little lampblack added to it and then melted and put on the boots with a brush and held before the fire until dried in. Treated in this way the boots would shed water like a duck's back. The last pair of boots I had were made for me by a young French boot maker by the name of Marcott. He made me two pairs—one pair known as kip boots for which I paid him six dollars. The others were French calf of the very best material, all sewed by hand. For this pair I paid him ten dollars, and these were by odds the cheapest footwear I ever bought. I wore these ten dollar boots four years for best. Then I wore them two years in a store. Then I gave them a rest of about a year, then wore them two or three years more in the store, and still they seemed as good as the day they were made except the soles which I had to replace two or three times.

The boys have worn these boots at times and they are still in the house with not a break or a crack in them. These boots (both pairs) were made on a fire last and were the easiest boot I ever owned. I could pull them on or off without using the bootjack. The only time these boots went back on me was when I went to the Centennial Exhibition at Philadelphia. I stopped over a couple of days at New York City and after tramping about the city for two days my feet were so swollen it required a jack to get the boots off. The morning I started for Philadelphia I could not get my feet into the boots. When I left New York it was too early in the morning to get into a shoe store, so I went to Philadelphia in my stocking feet. Then I took a horse car and went down town and bought me a pair of serge congress shoes, size 8. I wore them the two weeks I was attending the exhibition. It was some time after I returned home before I could again get my feet into those old boots.—A. A. Halladay, Vt.

Nuggets

Ever notice that the people who are willing to share their last dollar with you never have a dollar?

Any artist can make his model stand around, unless he happens to be married to her.

Even the people who stand up for their own rights might prefer to sit in the lap of luxury.

The one man in the world who thoroughly believes in hero worship is the hero.

The income tax doesn't bother the man whose principal holdings consist of castles in the air.—N. Y. Times.

INSOMNIA

Leads to Madness, if not Remedied.

"Experiments satisfied me, some 5 years ago," writes a Topeka woman, "that coffee was the direct cause of the insomnia from which I suffered terribly, as well as extreme nervousness and acute dyspepsia."

"I had been a coffee drinker since childhood, and did not like to think that the beverage was doing me all this harm. But it was, and the time came when I had to face the fact, and protect myself. I therefore gave up coffee abruptly and absolutely, and adopted Postum for my hot drink at meals."

"I began to note improvement in my condition very soon after I took on Postum. The change proceeded gradually, but surely, and it was a matter of only a few weeks before I found myself entirely relieved—the nervousness passed away, my digestive apparatus was restored to normal efficiency, and I began to sleep restfully and peacefully."

"These happy conditions have continued during all of the 5 years, and I am safe in saying that I owe them entirely to Postum, for when I began to drink it I ceased to use medicines."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs.

Postum comes in two forms:

Postum Cereal—the original form—must be well boiled. 15c and 25c packages.

Instant Postum—a soluble powder—dissolves quickly in a cup of hot water, and, with cream and sugar, makes a delicious beverage instantly. 30c and 50c tins.

Both kinds are equally delicious and costs about the same per cup.

"There's a Reason" for Postum.

—sold by Grocers.

Notes From Green's Fruit Farm

An Orchard that Occupies No Land

THE above seems impossible and yet it would seem to be nearly true. At Green's Fruit Farm in a ten-acre field I plant the entire length of the field to rows of fruit trees, four, five or ten rods apart, or so far apart as not to disturb in the least the cultivation of the field by plowing or harrowing, or the occupancy of the field for growing farm crops, or crops of small fruits. In this way the owner of the farm can be getting his farm into condition to produce a vast amount of fruit at slight expense, and scarcely any expense for cultivation. In this manner I have brought a large number of fruit trees into bearing at Green's Fruit Farm, and the trees bear abundantly.

Supposing you have a ten-acre field. Whether it is square or not is not essential, but we will assume that it is nearly square. Open four furrows through the entire length of this field through the center of the field, and plant in this furrow a row of apple, pear or cherry trees, standards, not dwarfs, though dwarf pear trees would succeed. After planting this row you will probably want to plant another row on either side of this first row, so that the three rows running the length of the field will be about equal distances apart and equal distances from both side lines.

I advise planting the trees not over six feet apart, no matter what they are, whether apple, pear, cherry or plum. It will be many years before the trees crowd each other, since they get the light and air from both sides.

I advise cultivating with one horse cultivator the soil along either side of the three rows of newly planted trees, at least for a few years until they get a new start. After that the ordinary cultivation given in growing small fruits or farm vegetables or grains will keep the trees in fair tilth.

At the end of a few years your farm thus planted will sell for much more money than it would before this planting was done, and be far more attractive and profitable for yourself or any other individual.

Waste of Labor

Labor is money. Wasting labor is like wasting money. How sad to consider how much labor is lost on the average farm. My superintendent at Green's Fruit Farm in preparing eight acres for planting estimates that he has blown out fifty tons of rock which impeded the plow. This occurred in marvellously fertile soil in which potatoes grew last season almost as large as a man's head, so large that they were unsalable. These rocks, thus blasted out at this late date, have been plowed over by previous owners of this land during a period of fifty years. Just think of it! It cost more to dig out the rock now than it did fifty years ago, for labor is higher now. During one hundred years the rocks have been an impediment and a source of delay and a source of danger, and yet at the end of one hundred years they must be taken out. Alas, what bad management, and this is a sample of that which occurs on half of the farms of this country. The effort is made to get along each year with as little expense as possible without regard to economy in the long pull of years.

These rocks which we have removed, and more elsewhere which we must remove later, were brought down from Alaska or other northern points during the ice age, when the ice over our farms was a thousand or more feet thick. Gravel, sand and clay were brought down with the rocks, thus where you find rocks like ours you usually find a productive and a deep soil, therefore I am not discouraged when I find scattering rocks or stones in a farm which I am purchasing.

The Windsor Cherry

The foreman at Green's Fruit Farm writes me calling attention to this valuable black or almost black cherry. He says it is a remarkable black variety, ripening very late, after the Black Tartarian and other cherries have ripened and are marketed. The fact that Windsor ripens at a date when there is no competition on the market is in its favor as a market variety and makes it of great service as a family cherry coming so late in the season, from ten days to two weeks. My foreman says

that this is the best black cherry grown. He makes no exception whatever, but I cannot fully agree with him in regard to quality, since for eating out of hand I would prefer the Black Tartarian which has a more tender and juicy flesh. The flesh of the Windsor cherry is meaty, more like the flesh of cherries grown on the Pacific Coast. For this reason the Windsor will ship better than Black Tartarian. My foreman says that Bing cherry may be as good, but Bing is not as productive as Windsor.

The Windsor cherry growing in my garden at Rochester, N. Y., has a peculiar history. There are people who complain that they have difficulty in making sweet cherries of this class live when transplanted. One day while walking through the building where trees were being packed for shipment, I saw lying upon the sand, without any protection of roots or branches, a smallish cherry tree so poorly shaped and with such poor roots it had been cast aside by the packers as worthless. This small cull tree had lain fully exposed in the building for several weeks. I picked it up and decided at once that I would test my ability to make this tree grow in my garden. I cut back the top severely, leaving simply stubs of branches three or four inches long, and cut off with a sharp knife the ends of the bruised roots, then took a spade and dug a hole in my garden, much larger than the roots were expected to occupy, and placed the tree in this hole a little deeper than it grew naturally in the nursery. Then I filled the hole with fine garden soil, packing it as firmly as I would pack the earth around a fence post, first putting in a few shovelfuls of earth and packing it, then more earth, packing it firmly, and so on until the hole was nearly filled; then I left some loose dirt on the surface to prevent evaporation of moisture. This little bruised Windsor cherry tree did not start to grow immediately. In two or three weeks I saw that the buds were swelling and soon after the leaves began to appear and I felt sure of success; meanwhile I kept the ground loose about this tree with my hoe. For several years this tree has borne fine crops of beautiful Windsor cherries. It began to bear the fourth year after planting. This year it has a full crop. During its fruiting we have scarcely found a defective cherry.

May 10th.—Apricots cherries, peaches, pears (with the exception of Seckel) and plums blossomed full. Apples with a few exceptions are showing a bloom that is most encouraging. Strawberries have had no setback and in a few days the rows will look as though covered with a white sheet. Unless the unexpected should turn up in a severe frost there will be an abundant setting of fruit. I cannot remember a season when the outlook for a bumper crop of all kinds of fruit was more promising.

Today fifty men are busy on the farm planting trees, cleaning out weeds from rows of fruit trees, rubbing off surplus sprouts, burning brush piles and cultivating the growing trees and plants, and doing other work that it is well to do in early May.

Planting Tip Raspberries.—One thousand plants of a new variety were received from a distant state. The plants were in good condition, the land set aside for them also was in good condition, and the following day the plants were set. Today 998 of the plants are alive and growing finely. A neighbor received one hundred plants just like them (except in name), planted them and has seven plants only showing life. This latter experience is the experience of many. In most cases the planter buries the germ growth so deep that it cannot push forth or fails to press the soil firmly. If planters would but learn how to handle and plant the tip raspberry as the farmer learns to handle a cabbage plant, there would be little if any loss.

Blue Spruce.—Some of my friends have been disappointed with the appearance of the blue spruces as the specimens looked very little different when received than the common Norway. But if the plants are the genuine Koster's blue, their disappointment will be turned to admiration next summer if not this. Not only does the blue spruce when young take on a greenish appearance during the winter

months, but the plants are somewhat affected by transplanting and usually do not make a very decided blue showing the first season.

White Birch.—One acquaintance ordered a white barked cut-leaved weeping birch of a neighboring nurseryman and when it came, seeing that the bark was brown and not white, promptly returned it to the shipper as "it was not what he ordered," not knowing that this tree does not take on its white bark until it is from three to five years old.

Ornamental Shrubs.—I took a long ride the other day through parts of Monroe, Livingston and Ontario counties. Generally things looked good to me. Particularly noticeable about the house and ground decorations were the masses and single specimens of flowering shrubs. The Forsythia (Golden Bell) was seen at its best that day. It is a gorgeous and very pleasing shrub indeed. Pyrus Japonica (Japan Quince) in various colors were not in full bloom but were budding well. This is another of the best of the hardy shrubs. Everywhere evidences were found of a desire to beautify the lawn and ground around the house, as many newly planted specimens were noted.

Cutting Back.—However, there seems to be a general difficulty in educating planters to the necessity of cutting back newly planted stock. I refer now more especially to roses and fruit trees, for in many instances shrubbery may be set as received from the nursery and do well—but not so with fruit trees, hydrangeas, rose bushes, and some other things. On the occasion of which I write, I saw perhaps one thousand newly planted trees, some apple, some peach, cherry, plum, poplar, currant bushes, etc. Nice looking stock and apparently well planted, but the tops left on just as taken from the nursery. Later on I may go over the ground again and then I shall expect to see possibly fifty per cent dead. Trees should be cut back from one half to two-thirds of the last seasons growth, and roses should be cut down to within three inches of the ground when planted, if success is desired.—E. H. Burson.

BERRY BOXES AND CRATES

Their Sizes and Marks as Required, by U. S. Government

There has been great disturbance in the minds of the berry growers everywhere this spring on account of new regulations made by the U. S. Government. Exactly what these regulations were and when they were to come in force was vague. Finally a statement was received from the Government, stating that no markings relating to the amount of the contents would be required upon any pint or quart box, but that every crate should be marked. This is supposed to be in accord with the department of weight, measure or count, which requires that all classes of food must be plainly and conspicuously marked in terms of weight, measure or numerical count on the outside of the covering or container usually delivered to consumers.

The above refers to the Federal law. Each state may still have its own regulations, which it is assumed that berry growers are familiar with.

A meeting was recently held in Virginia by the berry box manufacturing association.

The association unanimously ratified the reports of the committee on standardization of packages. Four quart tills are to be five and five-eighths inches long, bottom score; four and one-quarter inches wide. American quart basket, five inches top, from corner to corner inside; bottom four and three-eighths from corner to corner depth two and fifteen-sixteenths inches.

July or August Planting of the Strawberry

Nurserymen often get letters from amateur fruit growers asking for strawberry plants in July or August, but the fact is there are no plants at that season, as the new plants have not formed and the old plants are not considered desirable for planting.

Those who have good varieties of strawberries growing on their place can transplant them in July or August successfully by the following method: Immediately after some heavy shower, dig up a

spade of earth containing one or more strawberry plants and place the spadeful of earth upon a wheelbarrow until you have a dozen or more plants thus encased in earth. Take these plants to a well fitted piece of ground and place them in excavations of proper depth, being careful not to break or disturb the earth surrounding the plant which the clod of earth contains. If you will follow this plan carefully you will not lose a plant in transplanting and the bed will bear a good crop of fruit the next year. I have followed this plan repeatedly and successfully. Last year in August I set out a bed of strawberries in this manner without losing a plant. The bed promises to yield abundantly of strawberries this year. Such planting as this is better and more successful than planting potted plants.

Eating Strawberries

Written for Green's Fruit Grower by Jacob Faith

I was first to grow strawberries in Southwestern Missouri and to urge strawberry culture.

Last year on account of climatic conditions and the peculiar conditions of the soil, I predicted the poorest crop raised in this section for the past forty years. It proved to be true. However, I also predicted the largest crop in years for 1915, and every indication points to that end.

Prices will necessarily be low after the first ripening, but the first berries to reach the market will command a good price.

Nearly everybody likes strawberries except M. D.'s—while they like to eat them they are not very enthusiastic in recommending them to other folks, as the people who eat strawberries are rarely ever sick. The strawberry is delicious in flavor, healthful to the greatest degree and contains acids that are invaluable as a tonic to the human system.

Dietary scientists have proven that fruit acids neutralize the poisons introduced into the stomach through such agencies as indigestible foods, alcoholic drinks, etc., and that if fruits are eaten to the exclusion of hog meat, etc., there is a marked physiological change. You must concede that the strawberry cure is much better in every way for constipation than pills.

And listen! Which would you rather have your loved ones develop an appetite for strong drink and unnatural foods or an appetite for the natural foods? If you would prefer the latter then encourage the use of more fruit, and especially is this true of the strawberry.

WHEN DINNER COMES

One Ought to Have a Good Appetite.

A good appetite is the best sauce. It goes a long way toward helping in the digestive process, and that is absolutely essential to health and strength.

Many persons have found that Grape-Nuts food is not only nourishing but is a great appetizer, and children like the taste of it and grow strong and rosy from its use.

It is especially the food to make a weak stomach strong and create an appetite for dinner.

"I am 57 years old," write a Tenn. grandmother, "and have had a weak stomach from childhood. By great care as to my diet I enjoyed a reasonable degree of health, but never found anything to equal Grape-Nuts as a standby."

"When I have no appetite for breakfast and just eat to keep up my strength, I take 4 teaspoonfuls of Grape-Nuts with good rich milk, and when dinner comes I am hungry. While if I go without any breakfast I never feel like eating dinner. Grape-Nuts for breakfast seems to make a healthy appetite for dinner."

"My little grandson was sick with stomach trouble during the past summer, and finally we put him on Grape-Nuts. Now he is growing plump and well. When asked if he wants his nurse of Grape-Nuts, he brightens up and points to the cupboard. He was no trouble to wean at all—thanks to Grape-Nuts."

Name given by Postum Co., Battle Creek, Mich. Read, "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

G R C. A.

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URGES G To Afford

"I will shrubs," food for birds for winter have been advice to birds to the tioned in the government Magazine, tions cover twenty years "Last year was entire showing we get enough fruit of the stolonifera

billed bird brown thr food for a of the best "For sp and the Ja bunda, ar waxwings. excellent, tiana and preferred. oleaster, c relished by "If a p paradise, n in the fol It would b cut out thi "Mulber Mahaleb red cherry bird cherry flowering c wood, mo hackberry, sumac, sn trees for w bills and pi and canoe ridges; el Cornus, E Myrica cer and all ju and bella odoratus, varieties, B zereum, B quail; cer varieties,

GREEN'S FRUIT GROWER

The Oldest Fruit Journal in America

GREEN'S FRUIT GROWER CO., Publishers
C. A. GREEN, Pres. and Treas. R. E. BUALLEIGH, Vice-Pres. and Mgr. M. H. GREEN, Sec'y.
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NOTICE TO SUBSCRIBERS:—If any subscriber has been defrauded by any advertisement appearing in Green's Fruit Grower, he will do us and the public at large a service by at once reporting this advertiser to us, giving full particulars, we will upon receipt of full particulars, investigate and will do everything in our power to bring about a satisfactory adjustment.

Subscribers who change their residence will please notify this office, giving old and new addresses.

Entered at Rochester (N. Y.) Post Office as second class mail matter.

URGES GROWING FRUIT FOR BIRDS To Afford Food When Usual Sources Are Covered

"I will give you a list of trees and shrubs," said Mr. Laney, "which furnish food for birds, some for summer and others for winter birds. Many of these plans have been mentioned in books giving advice to persons who wish to attract birds to their houses and others are mentioned in bulletins from the United States government and in the Geographical Magazine, but all are founded on observations covering a period of more than twenty years in the Rochester parks.

"Last year the fruit of the candleberry was entirely consumed in Highland Park, showing what a hard time birds had to get enough to eat. For summer food, the fruit of the redosier dogwood, *Cornus stolonifera*, is eagerly devoured by soft-

flower, bachelor buttons, wild roses, crataegua, Hall's honeysuckle, red flowering horse chestnut, privets, hypericums, all native wild roses, poke weed, box elder for evening grosbeaks, and *Diervilla hybrida*."

Pruning Dwarf Trees

Mr. C. A. Green:—I have obtained much good information from your "Fruit Grower." My husband and I expect to purchase five or ten acres to devote to poultry and fruit. In the meantime we are getting as much experience from our seventy-five by hundred lot as possible.

I have thirteen splendid Plymouth rock pullets that are of my own raising and are laying splendidly. We had the prize vegetable garden of our town last year. My dwarf pears and apples are three years old. They grew splendidly and height to top shoots is fully eight feet on all of them. Should I prune these longest branches, say, six or eight inches? The pears have lots of short shoots on the main branches. Should any of these be taken off?

My three-year-old peach tree is a beauty. It bore two immense peaches when a year and a half old. It is about eight and a half feet high and very symmetrical. It has not been pruned. Do you think it should be this season?—Mrs. Josephine W. Craig, Pa.

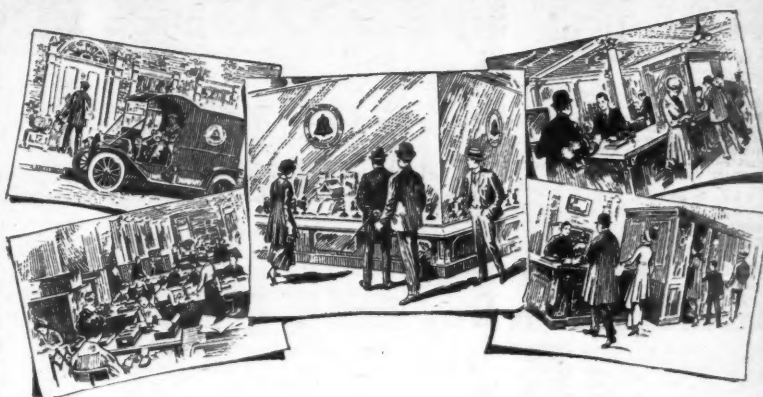
Reply: Yes, the most vigorous growing shoots, those that exceed the other top branches particularly, should be cut back severely each season. If these overstrong growing shoots are not cut back severely it will be impossible to secure a well-formed head. But progressive fruit growers are more inclined each year to cut back a portion of the last year's growth of all the topmost and side shoots of fruit trees, thus not only keeping the head well-balanced, but tending to promote the formation of fruit buds. On peach trees particularly it is helpful to cut back at least half of the new growth of the preceding year. This cutting back should be done every year and it will keep the tree from overbearing and prevent its sprawling too much or running too high.

Dear Mr. Green:—I enclose you \$1.00 for the Fruit Grower three years. I do not wish to miss a single number as it has been a great help to me and has saved me many blunders in my 27 years of fruit growing in Michigan. It is the best and most interesting paper of its kind I ever saw. Have taken it steady for over 30 years or long before it became a monthly. Long live the fruit grower and its Editor.—Wm E. Merrill, Mich.

Louisville, Ky., May 10, 1915.

Green's Fruit Grower,
Rochester, N. Y.

Gentlemen:—I get more information out of "Green's Fruit Grower" than any two other magazines I've ever read.—Eugene Doelckuer.



Doing Business with a Business Concern

The business man is an important factor in your daily life and happiness.

He may raise wheat or cattle; he may manufacture flour or shoes; he may run a grocery or a drygoods store; he may operate a copper mine or a telephone company. He creates or distributes some commodity to be used by other people.

He is always hard at work to supply the needs of others, and in return he has his own needs supplied.

All of us are doing business with business men so constantly that we accept the benefits of this intercourse without question, as we accept the air we breathe. Most of us have little to do with government, yet we recognize the difference between business methods and government methods.

We know that it is to the interest of the business man to do something for us, while the function of the

government man is to see that we do something for ourselves—that is, to control and regulate.

We pay them both, but of the two we naturally find the business man more get-at-able, more human, more democratic.

Because the telephone business has become large and extensive, it requires a high type of organization and must employ the best business methods.

The Bell System is in the business of selling its commodity—telephone service. It must meet the needs of many millions of customers, and teach them to use and appreciate the service which it has provided.

The democratic relation between the customer and the business concern has been indispensable, providing for the United States the best and most universal telephone service of any country in the world.

**AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES**

One Policy

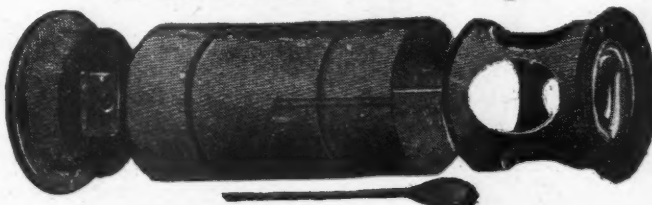
One System

Universal Service

How to Tell the Insects

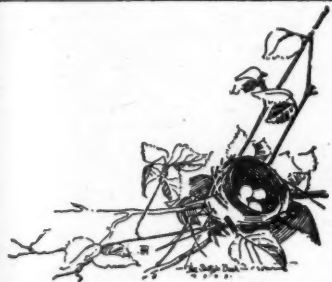
Get one of these microscopes and see for yourself what they look like. Then compare with the Spray number of Green's Fruit Grower. It will tell you just what to do to get rid of them.

A Scientific Microscope



This microscope is imported from France. As regards power and convenient handling, good judges pronounce it the best ever introduced for popular use. The cylindrical case is manufactured from highly polished nickel, while there are two separate lenses—one at each end of the microscope. The larger glass is a convex magnifier, adapted for examining insects, the surface of the skin, the hair, fur, or any small article. The other lens is exceedingly powerful, and will clearly delineate every small object entirely invisible to the naked eye. Every fruit grower, farmer, family, school and teacher should own a microscope. Full directions as to how to use it with each microscope.

OUR OFFER:—If you will send us two subscribers at 50 cents per year, we will send you this scientific microscope, prepaid, or given with Green's Fruit Grower, one year, for 50 cents.



billied birds like robins, catbirds and brown thrashers. The mulberry furnishes food for a long time in summer and is one of the best in the list.

"For spring and fall the mountain ash and the Japanese crabapples, *malus floribunda*, are eaten by robins and cedar waxwings. All the honeysuckles are excellent, but the two, *Lonicera ruprechtiana* and *L. bella candida*, seem to be preferred. The fruit of the Japanese oleaster, *Elaeagnus multiflora*, is greatly relished by many birds in summer.

"If a person wishes to make a birds' paradise, not one of the plants and shrubs in the following list should be left out. It would be well if our nurserymen would cut out this list and preserve it:

"Mulberry, red, Russian and white; Mahaleb cherry, wild black cherry, wild red cherry, wild chokecherry, European bird cherry, shad tree, native thorn trees, flowering dogwood, a ternate-leaved dogwood, mountain ash, wild crabapple, hackberry, buckthorns, hemlock, staghorn sumac, smooth sumac, larch and pine trees for winter food for grosbeaks, crossbills and pine finches; yellow, black, white and canoe birches for goldfinches and part-ridges; elderberries, seven varieties of *Cornus*, *Berberis Thunbergi* for quail; *Myrica cerifera* for winter birds; red cedar and all junipers, *Lonicera ruprechtiana* and *bella candida*, ribes aureum, rubus odoratus, chokecherry, viburnums eight varieties, partridge berry, *Daphne mezereum*, Buffalo berry, black locust for quail; *cercis canadensis*, *Elaeagnus* four varieties, *malus floribunda*, catnip sun-

The Thinning of Fruit

Too often the orchardist who is careful in the pruning, spraying and cultivation of his trees thinks that he cannot spare time and money to thin the fruit.

This is a serious mistake. No other orchard operation pays better. The profit of the crop depends to a large extent upon the proportion of number one fruit. When crops are very large, the best grade may be the only one to yield a profit, and in years of scarcity fine fruit brings fancy prices.

In thinning, the blemished and infested fruits are removed, leaving only what is sound; and if this should be too thick, it is thinned out until the individual fruits are not nearer to each other than the width of one's hand. This reduces the amount of culls to a minimum.

Nature's purpose in bearing fruit is to produce seeds, and these cause a much greater proportional drain on the tree than does the rest of the fruit. A small apple usually has as many and as perfect seeds as a large one; and a bushel of large apples is much less exhausting to the parent tree than the same amount of small ones. In the case of peaches the difference is still greater, as it takes as much vitality to produce a stone as to form the flesh of several peaches.

Thinning the fruit is a great help in conserving the strength of the tree for the following year. Such trees as the apple and pear, that bear their fruit on spurs, do not mature fruit on the same spur on two successive years. By removing all the fruit from some spurs early in the season, they will be likely to bear the next year.

Careful experiments indicate that the statement that thinning overloaded trees does not reduce the yield for that year is overdrawn, in the case of apples, though the quality and value of the crop are increased. But probably in a series of years trees whose fruit is systematically thinned each year will exceed the yield of similar trees whose fruit is not thinned during the same period, and the net profits from the thinned trees will be much larger.

A considerable part of the thinning may be done by the removal of superfluous branches. The direct removal of fruits should take place immediately after the "June drop," when a larger proportion of the blemished fruit falls. If a canvas be spread under the tree before thinning, the fruits removed may be easily and quickly collected and destroyed. Peaches should be removed when somewhat larger than cherries, and apples and pears when three-quarters of an inch or so in diameter.

The impression that thinning means a great deal of extra work is erroneous. The fruits rapidly gathered and dropped in June do not have to be picked and graded as seconds or culls in the autumn, when the fruit grower is more pressed with work than in early summer. No great amount of additional time is required, and the work is more evenly distributed through the season.

Plums may be thinned when about the size of cherries; and not only is there a gain in the size and quality of the fruit, but the danger of the spread of brown rot is much less than when this is done.

Currants may be thinned by clipping off the tips of the clusters with scissors before the flowers open. An experiment of this kind at the New Jersey Experiment Station in 1889 showed a marked gain in size, quality and yield by this method. As the work can be done rapidly, it would probably pay better when the fruit is sold in a discriminating market.

The direct thinning of fruit on raspberry and blackberry bushes did not seem profitable in some experiments conducted at Cornell; but the amount of fruit on such bushes may readily be controlled by careful pruning in spring after the buds have developed sufficiently for one to judge how much bloom there will be, some allowance being made for the occurrence of late spring frosts.—J. L. Doan, Department of Fruit Growing in Wise Acres.

A True Story of Apples at Forty Cents Each.

One New York commission man signed a contract for 6,000 apples—not boxes—for which he was to pay 15 cents each at shipping point in Missouri. Part of the order was filled with the much ridiculed Ben Davis. Twenty-five cents per apple represents the cost of transportation and profits of the commission man and of the

hotel serving the fruit, says Colman's Rural World.

During the following winter apples were listed on the menu cards of two or three exclusive hotels in New York. The patron of the hotel cafe indicated to the waiter the variety he desired, and in due time a sealed box, with a special knife for opening the box, was served on a plate. The consumer himself opened the box, removed the apple and returned the empty box to the waiter with the usual tip for service. All the result of one fruit grower's faith in doing thing out of the ordinary. Let us see how he selected and packed the fruit.

Each apple was perfectly sound, of high color and uniform shape, not less than three and one-half inches in diameter, nor more than a quarter of an inch larger. Each stem had at least two perfect leaves attached and each apple was packed in an attractive pasteboard box and the top sealed. Young ladies cut the selected apples from the trees with scissors to protect the leaves on the stems. The apples were placed on a cloth-covered table for inspection, and those that passed muster were dipped, leaves and all, in a solution which closed the pores of the skin and leaves, causing the latter to retain their natural color, and conserving in the apple the original flavor. After the solution had dried, each apple was wrapped in soft tissue paper to hold it firmly in its box, in which it was immediately placed. The leaves were carefully arranged on top of

the wrapping paper so that they would not be folded or crumpled, and the top was sealed. The foregoing details are given here for their interest and for a moral: If you want to do better than the other fellow, you must find the way. Try it in your apple business.

HOW TO HANDLE STRAWBERRIES

Harvesting and Packing in Southern States

From United States Department of Agriculture.

The stage of maturity at which berries should be picked in the South depends upon the distance they are to be shipped. When grown for a local market they should be picked when thoroughly ripe, but not soft. If grown for a distant market the berries must be picked before they are thoroughly ripe, but they should be fully grown and about three-fourths ripe. If picked before they are colored the berries will shrink and wither, making them unfit for sale. Strawberries should be picked with a short piece of stem attached (about one-fourth to one-half inch). They should never be slipped from the stem, as that spoils their appearance and injures their shipping and keeping qualities.

Uniformity in the pack is essential in order to obtain high prices for strawberries, and this can be secured only when the berries have been carefully graded and sorted. Some growers have the berries graded in the field.

After the berries are picked they should be placed in the shade as soon as possible, for heat injures the fruit in a short time. The pickers should not be allowed to leave the filled boxes along the rows, where the berries will be exposed to the sun. The shorter the time that elapses after the fruit is picked before it is put into refrigerator cars or refrigerator boxes the better it is for the berries, which will continue to ripen rapidly until they are chilled.

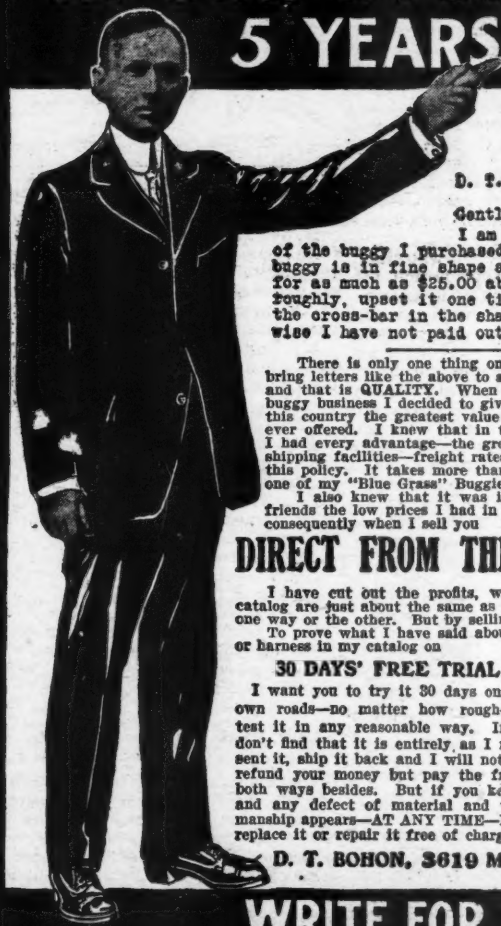
A large part of the strawberry crop grown in Florida is shipped to northern markets in refrigerator boxes. These boxes, or pony refrigerators, hold 60 or 80 quarts of berries. After the boxes of berries are placed in the refrigerator a metal tray is put in place above the berries and filled with ice. The main advantage in using these refrigerator boxes is in long distance express shipments where refrigeration is necessary.

Sharp Financiering

A pleasant-looking woman walked into a store and asked the price of the collars she had seen displayed in the window.

"Two for a quarter," said the clerk.
"How much would that be for one?"
"Thirteen cents."
She pondered. Then with her forefinger she seemed to be making invisible calculations on the sleeve of her shirt-waist. "That," she said, "would make the other collar 12 cents, wouldn't it? Just give me that one."

HERE'S A PICTURE OF A BOHON "BLUE GRASS" BUGGY IN USE OVER 5 YEARS



Read what the Owner says:

D. T. Bohon Co. Harrodsburg, Ky. Caldwell, N. J. June 7, 1913.
Gentlemen:-

I am going to write you a few lines and send you a photograph of the buggy I purchased from you five or six years ago. I wish to say that my buggy is in fine shape and is a better buggy today than the retail dealers sell for as much as \$25.00 above the price I paid you. My son used this buggy very roughly, upset it one time on a steep bank and the only thing that broke was the cross-bar in the shafts and this showed up to be very good material. Otherwise I have not paid out one cent for repairs.

There is only one thing on earth that will bring letters like the above to any manufacturer and that is **QUALITY**. When I went into the buggy business I decided to give the farmers of this country the greatest value for their money ever offered. I knew that in that way I could build up a business beyond the reach of competition. I had every advantage—the greatest oak and hickory section at my door—splendid manufacturing and shipping facilities—freight rates as low as anybody else, etc., etc. I have gone the limit to carry out this policy. It takes more than a smooth coat of paint to make a good buggy, and before I ship out one of my "Blue Grass" Buggies it must be as near perfect as human skill can make it. I also knew that it was impossible to sell my buggies through the dealer and give my farmer friends the low prices I had in mind. I had to cut out all heavy and unnecessary selling expense, and consequently when I sell you

Yours respectfully,

Thomas Deer

DIRECT FROM THE FACTORY---YOU SAVE \$25 TO \$50

I have cut out the profits, wages, expenses of jobbers, dealers and salesmen. The prices in my catalog are just about the same as the dealer would have to pay, and I make exactly the same small profit one way or the other. But by selling you direct you can readily see where you save from \$25 to \$50.

To prove what I have said about the quality of my "Blue Grass" vehicles, I will ship you any buggy or harness in my catalog on

30 DAYS' FREE TRIAL

I want you to try it 30 days on your own roads—no matter how rough—and test it in any reasonable way. If you don't find that it is entirely as I represent it, ship it back and I will not only refund your money but pay the freight both ways besides. But if you keep it and any defect of material and workmanship appears—AT ANY TIME—I will replace it or repair it free of charge.

D. T. BOHON, 3619 MAIN ST., HARRODSBURG, KY.

THIS BIG BOOK FREE

I am proud of this book. It's the finest buggy book ever issued. It shows more buggies and harness, carts, surreys and runabouts than you could find in a dozen dealers' stores. It shows how "BLUE GRASS" Buggies are built and how they are tested. It explains the details of my Free Trial Offer, my Unlimited Guarantee, etc., etc. All I need is your name and address on a postal card—don't put it off—send me that postal right NOW.



WRITE FOR THIS BOOK TO DAY

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Can Your Own VEGETABLES and FRUITS
STAHL Canning Outfits costs little, very easily operated. Over 100,000 in actual use. Can in either glass or tin, my formulas tell you how and contain no acids. My big 1915 catalog is FREE and contains actual reproduced photographs of users of my Canners. Write for a copy today, it is free.
F. S. STAHL Box 491 Quincy, Illinois

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Every bearing is constantly flooded with oil. Two quarts of oil in the gear case of the 8-foot Auto-oiled Aermotor will keep the gears and every bearing flooded with oil for a year or more. With its duplicate gears and two pitmen lifting the load straight up it is unbreakable. It runs in a breath of air. The galvanized helmet covers the gears, keeps out rain, keeps out dust, keeps in oil. If you are tired of climbing a windmill tower; if you are tired of buying repairs and having them put on; if you are tired of waiting for a big wind, let us furnish you this self-oiling, ever-going mill to go on any old tower. It costs but little and you will get the difference between no water in a light wind and an abundance of water in almost no wind. Write
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The Craftsman Tool Co., Conneaut, Ohio

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INSURE the potatoes and other vegetables, also fruit and trees from disease and pests.



ALL BRASS
double acting high pressure pump with relief valve. Absolute satisfaction. Write today for our **FREE** DESCRIPTIVE LITERATURE, ETC. describing Sprayers, Planters, Diggers, etc. **Champion Potato Machinery Co., 131 Chicago Avenue, Hammond, Indiana.**

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Dairy and Creamery

Raising Heifer Calves

The records of two herds of dairy cows owned by two neighbors furnish a striking example of the utility of dairy records to the man who really wants to build up a good herd. The first man has been cow testing for four years and has selected his cows carefully, studying their various preferences and capacities, each one as an individual. He raises heifers from his best cows; four two-year-olds gave last year an average of 7,144 pounds of milk, while his herd of ten gave an average of 8,059 pounds of milk and 259 pounds of fat.

The neighbor considers it simpler to buy just what cows he can.

He does not raise any calves. Last year his nine cows, all upwards of six years old, except two heifers, gave an average of only 4,240 pounds of milk. This is only just about one-half as much milk per cow as in the first herd. The best cow gave only 6,355 pounds, less than the average of the four heifers in the first herd. He has nothing on which to start building up a good dairy herd, unless it be his judgment in "picking a winner," which judgment, by the way, does not appear to be of A1 quality. The owner of the first herd has the advantage of four years of dairy records, practically indispensable to the real dairy farmer, besides matured judgment in handling cows to better advantage. Cow testing pays.—C. F. W., Dominion Department of Agriculture.

"Our Country, Right or Wrong?"

Mr. D. M. Dickerson of Iowa, a subscriber to Green's Fruit Grower, thinks that the nations of the world are wrong and that the teachers, members of the press and others are supporting national wrong, and by these erroneous teachings have got one half the world killing, robbing and murdering one another today, leaving women and children helpless.

Why is it right to do these things on a large scale when we realize that it is wrong to do them as individuals? Decent individuals would not rob or murder one another, but nations can do so with impunity. He is shocked to see nations appealing to God to help them kill their neighbors. Mr. Dickerson asks Green's Fruit Grower to come to his help in clearing up the situation.

C. A. Green's Reply: People who stand up for their government, their nation, are called patriots. No matter if the government is wrong, the common people are expected to sustain the government. This is not as it should be. It pains me to discover that the poor people, the laboring people, are the ones who suffer most from wars for which they are not at all responsible. I believe there is much which is called patriotism which might better be classified as thoughtless support of government leaders, when those leaders are in error in bringing on war or supporting war. So far as I can see there are many things in this world that have not been set running exactly right. Indeed almost everything is mixed with error and misunderstanding. But I still believe that the world is growing better and that the masses of the people are becoming more sensible and more conscious of their power and ability to shape the ends of government so that one man or a little handful of men shall not rule over a whole nation undisputed.

Making Use Of Vacant City Lots

by C. E. Whitney, Mass.

Editor of Green's Fruit Grower—The common habit of letting vacant lots lie idle and paying taxes on a crop of weeds never seemed like a paying proposition, when with a little money and care they can be made to supply a family with a good share of their food during the year. I have a lot in the outskirts of the city within a block of where I live. The lot is 100x176. A space of 100 ft. sq. I use for garden, the back end being covered with large maple trees.

I planted eight rows of bush beans eighty feet long. I sold from this patch \$15, besides all we used and canned for

winter use. From eight rows of sweet corn I picked about 1000 ears. What I sold from that amounted to \$5. From a patch of cucumbers 4 ft. x 70 ft. I picked 2500 cucumbers for pickles. What I sold came to \$10, besides several hundred for own use. I had beets enough to supply table during summer, also to put in cellar for winter use. From two rows of Swiss chard I supplied all the green stuff for a small flock of hens. I had lettuce, top onions and tomatoes for own use and sold some. I had 400 heads of cabbage, sold \$5 worth, and put remainder in cellar for winter use. My squash patch was 20 ft. x 80 ft. From this I got 700 lbs. good Hubbard squash; I sold about \$5 worth and still have a good supply in cellar now.

From one bushel seed potatoes I got ten bushels by weight. Not a foot of ground went to waste. I even grew the potatoes on the sidewalk, or where it was supposed to be. All I paid out was \$3 for six one-horse loads of manure, \$2 for 100 lbs. phosphate and what seed I used. I also have in the garden twenty-six apple, plum, pear and cherry trees from Green's best grade stock. The cherry, plum and several dwarf apple trees had fruit last year, being the third year planted. They are arranged on the lot so as not to interfere with a house being built, and two cherry trees being in front as shade trees.

Although a garden of this size for a man working ten hours a day in the shop means a good share of his spare time, I am sure he will benefit by it both in pocket and health.



Reunited Niagara Falls Honey-moon Couple

H. W. Taylor and his bride, who come from Niagara Falls, N. Y., and were among the Lusitania Steamship survivors, were on a honeymoon. They were separated at the moment the ship went down and were reunited almost by a miracle.

Mr. Taylor placed Mrs. Taylor in a lifeboat filled with other women and cut the boat free himself after kissing his wife good-bye.

"Then I stood on the rail and waited for the end. I can't swim a stroke and I knew it useless for me to jump as I had not even a life belt," he said.

"I went down with the ship but after what seemed to be an eternity came to the surface and grabbed frantically at some pieces of wreckage. They could not help me and I went down twice more.

"I felt a hand on my collar and felt somebody pulling me up into a boat. Then I felt a woman's arms around my neck and I opened my eyes to discover that the woman was my wife sitting in the boat just where I had put her."

Jacob, Faith Our Missouri Correspondent. Talks of School Room Days

The school room is the nursery. If a tree has been neglected in the nursery it is impossible to make a profitable orchard tree out of it. The same may be said of a boy or girl whose education has been neglected and whose mental faculties are starved. These seldom make useful men and women. If you want a harvest you must sow seed at the right time of the year. My young friends, if you fail to study to sow seed when you are young, you will surely fail to reap a harvest. In your imagination you look into the future for sunny and happy days. If you could lift the veil and read on the pages of coming years some of your eyes would dim with tears, and the silent grave would

be welcome. Had I words, language and influence to persuade every young man and woman to resolve to live a thoughtful, honorable life, the school room would be a peaceful place to prepare for future life.

Education is the greatest possible blessing your parents can give you. Wealth can be taken from you; not so with education. In your old days it gives you more comfort than wealth. To me a boy or girl looks one hundred per cent better at school than anywhere else; there is no place more profitable or instructive than the school room. When I see a young man with a plug of tobacco in his pocket, no pocket knife or a cent of money, it looks to me that he must improve to become a useful man.

Memory carries me back to my school days. In my sixteenth year I learned the alphabet in the English language, and that was my hardest lesson. The school house was a log cabin; the seats of split logs; the teacher's qualifications and studies were only fair. If you wish to make life a success be advised by the following rules:

1. Be industrious and secure yourself an education.
2. Be saving but not stingy.
3. Before you make a promise study if you are able to comply; never go back on your promise if possible to keep it.
4. If possible to keep from it, do not go in debt.
5. Have a home, if only ten acres rather than a section with a mortgage on it.
6. Read papers calculated to benefit you by their accumulated wisdom that leads you to success.
7. Do unto others as you would have others to do unto you.
8. Be sociable; try to make yourself useful and thus make yourself welcome wherever you are.
9. Remember that you have two eyes, two ears and only one mouth; this should teach us to speak much less than we see and hear. Study twice before speaking once.
10. Do not speak disrespectfully of a lady. To slander a woman, to rob her of her good name, makes her poor indeed. Her money is but trash compared with her good name, which belongs to her and not to you.
11. Shun intoxicating drinks. Many, when intoxicated, have committed deeds that brought them to endless shame and ruin.
12. Shun tobacco; it's a filthy, expensive habit. Money worse than thrown away. Do not cultivate a perverted appetite you will much regret in future years.
13. Shun profanity; nothing will make you a more unwelcome guest than the use of profane language. An oath will not give your words weight, but lessens their power.

When a Ship Strikes a Mine

But to merchantmen, to the smaller and older warships—to everything that floats, except the very highest and more recent products of the shipbuilder's art—the mine presents the danger of complete and almost instant annihilation. The rigidity of the ship is in itself an element of danger, for the water surrounding it is incompressible. If the skin and frame could give way without rupture, and permit the enormously expanding gases (2000 times the volume of the solid explosive) to transmit their energy in such a way as simply to push the ship to the surface, the damage might be slight. But this cannot be. There is no such elasticity available. And the expansion is so nearly instantaneous that pushing the ship aside is physically impossible. Therefore the structures must break, releasing the gases first into the interior, and then by lines of least resistance finally up into the air. This action is completely instantaneous. It blows off hatch covers and deck plates, twists massive steel members into unrecognizable shapes, spreads havoc broadcast. It transmutes a proud ship into a sinking mass of wreckage—a happy passenger saloon into a shambles—carries mourning into a hundred homes. Such is the effect of mines.—Leslie's.

The steamer "Cairnhill," clearing from San Francisco January 4, carried 165,443 cents barley to Great Britain. The steamer "Craigina," clearing from San Francisco the same day, carried 128,736 cents barley and 37,482 hops pounds to Cork.

Dairy Notes

Do not slight the milking, but get the last drop. There is no quicker way to decrease the flow of milk than to leave a little each time.

One of the surest and best ways to build up a runout farm is to keep a good herd of cows, and to put every pound of manure back on the land. Quite often a farm is judged by the cows it supports.

Salt is cheap. Give the cows all they care for.

Any dairy cow of any breed should give her own weight in milk each month for at least six months, and an extra good cow will do better.

The increase in the cost of living will stimulate the greater demand for dairy products.

Raising dairy cows is one of the most profitable lines of farming. The prices that are being paid both at public and private sales look good to everyone.

It don't pay to keep cows for a side issue. Get the best and make dairying a business just like any branch of farm work.

Loss in Dairying

The principal cause of loss in dairying is the keeping of cows which do not pay for the food they eat; they have come to be known as "lady boarders" and serve their most profitable use, according to the dairy experts, when converted into meat and hides.

The one way to insure their elimination from the herd is to determine the yield of each cow by weight of milk, and by the use of the Babcock test for the butter-fat content. The formation of cow-testing associations is urged upon dairy farmers, and details of their organization and purposes are given. It is announced that copies of this bulletin, number 357 in the Cornell experiment station series, entitled "The Cost of Milk Production," may be secured free on request by residents of New York.

The 1914 Apple Crop of Lawrence County, Pa.

Written for Green's Fruit Grower by J. C. M. Johnston, Pa.

The crop was too large to be profitable. My orchard of 30 acres required about 15 men for about four weeks to pick, beginning in late September. The bulk of the picked apples were barreled and put in cold storage in New Castle; but the long drouth through the summer caused the Baldwins to drop badly and about 1000 barrels fell on the straw mulch. These were not bruised much, so we put them in the cellars and are wholesaling them now at 35 to 40 cents a bushel. (These apples pay better than potatoes—Editor.) Rome Beauty has a longer fruit stem than the Baldwin, and hung on the trees till snow fell, and were the last to be picked except the Ben Davis. King was the first picked, then Fallawater, Greening, Detroit Red, Pewaukee, Rambo, Golden Gate, Jonathan, Nero, Baldwin, Seek-No-Further, Northern Spy, Mother, Talman Sweet, Albemarle Pippin, Smith's Cider, Wine, York Imperial, Salome, Rome Beauty, Russet, and Ben Davis, in the order named. The list is long, but fortunately the orchard consists mainly of Baldwins, having only about one tenth in all the other varieties. We use step ladders and extension ladders, but next year I purpose to get a few single ladders 24 feet long, made of the lightest strong wood, and with rungs only about 6 or 8 inches long at the top and about a foot long at the bottom, being made narrow so that a man can handle them easily.

Our barreled apples will be held in storage for a few months in the hope that prices will rise to a paying basis, for at present prices apples do not pay for growing them. The public and especially the poor have an unusual opportunity this winter to get abundant apples, at the lowest price ever known. My wagon is delivering heaped up bushels of Baldwins in New Castle now at 35 cents to the grocers or 40 cents to the private customers. Of course these prices do not pay the expense of growing.

The orchardist has much to contend with besides low prices. Barrels are costly and hard to get and hard to haul from the depot to the orchard. If I knew where to get a carload of barrel staves and hoops, and if I could find a cooper to put them together, I would buy the stuff and put the barrels together in the orchard, saving both freight and coopers' profits. The past summer our Talman Sweet was

severely stricken with fire blight. Other varieties escaped almost entirely; but the Baldwin trees that stood beside the Talman Sweet, on the east side, had a bad attack of blight on the side next to the Talman Sweet, showing that the prevailing west wind had carried the disease to the half of the Baldwin tree adjacent to the Talman Sweet. As this occurred in three different places throughout the Baldwin orchard (where the three Talman Sweet trees were planted in mistake when the orchard was set out), there is no doubt of the correctness of the observation that the west wind will spread the blight. For a remedy, every blighted twig will be cut out and burnt hereafter, and no more Talman Sweet will be planted. Hereafter in my planting I will confine myself to blight proof varieties and will plant only selected varieties for my special market and special purposes.

An absurd law was passed by the last Legislature, requiring apples to be sold by weight, at 50 pounds to the bushel. What could be more foolish than for a farmer to carry a pair of scales with him from house to house, to sell 10 pounds of apples from his wagon here, and 15 pounds there? Moreover, all apples have not the same weight, as a bushel of Baldwins weighs 44 pounds and a bushel of Ben Davis 40 pounds. An effort will be made at the next meeting of the Legislature to have the law repealed.

In spite of his troubles, the orchardist's life has many compensating pleasures. He has work all the year around, and a steady income; his surroundings are pleasant—the green trees, the sweet smelling blossoms, the red apples hanging in ropes from the trees; visitors come from miles away to see his long rows of Baldwins and Jonathan bearing down with glorious red apples, burnished and glistening in the autumn sunshine; while every winter night he feasts on a dozen Rambos, Jonathans and Seek-No-Further.

Why and When We Need Lime

The real functions of lime is a subject which is bringing about a great deal of discussion. And right that it should as perhaps no other material can remedy our soils in as many different ways as lime, viz., as a fertilizer, in destroying acidity, as a liberator of plant food, and for the improvement of its mechanical condition. Any substance which forms a part of a plant and which aids in its growth is plant food. For instance, in a hundred pounds of corn there is about one and one-half pounds of nitrogen and one-fourth of a pound of phosphorus, which, without argument, would be termed plant food. The average ton of alfalfa hay contains about 42 pounds of lime, clover hay not quite so much. This proves that while the soil must not only contain enough lime to neutralize the acidity, for clover and alfalfa to give the maximum crop it must be sufficiently supplied to furnish the large amount of lime which is required to grow these crops. In this way lime is a fertilizer. A test of the soil as to the lime content can easily be made by pouring some muriatic acid on a little moist soil which has been taken from the field, perhaps several inches beneath the surface. If the sample of soil is well incorporated with lime it will show effervescence, in other words it will begin to boil. If this test fails to show any lime, dig down several feet and make another test with the acid. It often happens that the lime in the surface soil has been exhausted and there still remains an abundance of it down in the subsoil, this proving that the lime is becoming exhausted by such crops that use it in making their growth. We find a very good example of such conditions in England, where today the chalk pits, that twenty years ago were practically abandoned, are being reopened for the purpose of reliming the land.

As to the acid test, get a little blue litmus paper, imbed it in some real moist soil and let it remain there fifteen or twenty minutes and if in this length of time the litmus paper has turned red there is acid in the soil, which must be destroyed by the application of lime before maximum yields can be produced.—Farmers' Guide.

Green's Fruit Grower—The Fruit Grower is the best paper of the kind I ever saw, as it is a perfect guide for anyone interested in fruit culture, and gives interesting points on many other subjects.—F. H. Woodman, Me.



SEEING the Difference

BETWEEN THE

DE LAVAL

AND OTHER

Cream Separators

IT DOESN'T TAKE AN EXPERT knowledge of mechanics or a long working test to tell the difference between the De Laval and other cream separators.

ON THE CONTRARY, WITH A 1915 De Laval machine placed beside any other separator the difference is apparent at first sight to the man who never saw a separator before.

IF HE WILL THEN TAKE FIVE minutes to compare the separating bowl construction; the size, material and finish of the working parts, particularly those subject to wear and requiring to be occasionally taken apart and put together; the manner of oiling, and everything which enters into the design and construction of a separator as a simple durable machine, he will still further see the difference.

IF HE WILL GO A STEP FARTHER and turn the cranks of the two machines side by side for half an hour, particularly running milk or water through the bowl, he will see still more difference.

AND IF HE WILL TAKE THE two machines home, as every De Laval agent will be glad to have him do, and run them side by side in practical use, the De Laval one day and the other machine the next, for a couple of weeks, he will see still greater difference in everything that enters into cream separator practicability and usefulness.

THE MAN WHO TAKES EVEN the first step indicated in seeing for himself the difference between the De Laval and other cream separators doesn't put his money into any other machine one time in a thousand.

THE COMPARATIVELY FEW buyers of other separators are those who merely read printed matter claims or listen to the argument of some dealer working for a commission, and who do not think it worth while to see the difference for themselves.

THE WISE BUYER OF A CREAM separator today does see this difference when buying his first separator, while the unwise or careless one usually finds it worth while to do so when he comes to buy a second cream separator a year or two later.

EVERY DE LAVAL AGENT considers it a privilege to show the difference between the De Laval and other separators, and to afford every prospective buyer the opportunity to try out and prove the difference to his own satisfaction, if on first examination he feels the slightest doubt about it.

THAT'S THE REASON WHY four buyers out of five are buying De Laval Cream Separators in 1915, and why the use of De Laval machines will, before long, be nearly as universal on the farm as already is the creamery and milk plant use of power or factory separators.

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Proper Mixture Necessary

Efforts to Kill Eggs of Aphis and Leaf Roller While Trees Are Dormant and Before Lady Bugs Come

B. J. Case of Sodus, former president of the New York State Fruit Growers Association, and the best known fruit expert in this section, has written the following letter to a sprayer company, which will be of vast interest to fruit growers, says dispatch to the Herald:

"I met Percival Teats this morning and he gave an account of his trip with you through the orchards about Hilton and west. Personally, I have a lot of faith in some mixture if you can find such a mixture that will kill the eggs of the aphid and the leaf roller while the trees are dormant before the lady bugs have put in their appearance. I have gone after the lice three or four times in my lifetime with sprays that would kill them by contact during the growing season, and every time when I have gotten through, I have been convinced that I did more damage than I did good. The points are these: That it is practically an impossibility to kill all of the lice while spraying at that time of the year with a contact spray. We are pretty sure to clean all of the predaceous insects which feed on them under ordinary conditions. We have three of these insects that are usually

found that I have stuck the apples to the trees in much larger numbers than almost anyone I know of, and have had to do much more thinning on that account. We find that the case this year. There are plenty of apples on my trees that are good, clean, sizable fruit for this time of the year after we have done all of the thinning we think necessary."

Indiana Orchard Notes

Editor of Green's Fruit Grower:—The sun shone through the apple trees on Christmas day and according to an ancient belief we will have a bountiful apple crop this year. Our state was almost destitute of this kind of all fruits last season, caused from excessive rains and warm, foggy weather during the late autumn before, which forced the fruit buds to such an extent that they were killed by the severe winter weather.

There were carloads and carloads of apples shipped into our state from Michigan last fall, and as is always the case, there were all kinds and conditions of this fruit. One car lot from which I purchased was especially pleasing to me. The apples were of the King variety and were put up quite attractively in baskets holding about seven pecks each. So many persons imagine they are getting a bushel of apples when they buy a basketful, though nothing is mentioned of amount by the seller except the price per basket. The man having charge of this par-



Scene in a Cherry Orchard of S. C. Comeons, Ohio.

The cherry after many years of neglect has at last come into its own. This is the way with many good things of earth. At first they are neglected, but if worthy they are appreciated later on as is the cherry today. It is not many years ago that the cherry was simply grown to supply the family as a garden fruit. Now it is planted in large orchards and shipped by the carload over almost every part of this vast continent.

very abundant in this section. They are the lady bug and its larvae, the larvae of the surface fly and the larvae of the lace winged fly. It was very apparent in our thinning of the Baldwin apple orchard south of the building on the Case farm, which we had sprayed earlier with whale oil soap and crude carbolic acid, three or four rows north and south. We are now thinning the apples east and west, and as quickly as we run across those rows we find the work of the lice has been much more severe than on the rows where we had not sprayed at all with the contact spray.

"Now I am writing all this to give you my ideas of what you are up against in furnishing a spraying material that will meet the demands of what the fruit growers are going to want to keep down the different families of the aphid which attack our trees.

"Mr. Teats suggested that you could put together soluble sulphur, whale oil soap and crude carbolic acid, each of sufficient strength to do the work which we expect each one of them to do. Mr. Teats and I have not agreed on the importance of the spray just preceding the bloom after the apples have separated in the bud and just before the blossom. I have worked for several years on the theory which has been advanced by Professor Whetzel, that the main cause for apples not setting or dropping very severely was not from a lack of pollenization, but was due to the roots of the fungus on the delicate stems choking off the flow of sap to the bud. Following out this theory in practical work, I have

ticular carload of apples grew the fruit in his own Michigan orchard and was very gentlemanly to deal with. I purchased scions of him which he cut and shipped to me in late November. I wrapped them in paper, placed them in a box in the cellar and covered them with damp sand. In May the man who always does the grafting for me, will examine each scion very carefully for blemishes and infections and will graft the most perfect ones onto seedling apple trees in the wood lot. To make assurances doubly sure the scions will be treated to a sulphur dip before the grafting is done.

The orchard is filled with favorite varieties of apples and for the past three years I have been grafting the new varieties that appeal to me onto the seedling trees that are scattered throughout the timber. Every year at garden making time I plant seeds that have been saved from choice apples during the winter. When the trees are two years old I set some of them along the fences and among the forest trees to graft onto, and give the remainder to people who have little or no orchard.

I think it the duty of every land owner to have an orchard and keep it in good trim and to have a berry patch and keep it in good trim too; but we know that is not always the case. I have thought that if every renter would set out at least a dozen fruit trees and a berry patch, then no matter where that renter moved, his children would have those things so dear to every childish heart.

A year ago last fall I had a forty acre corn field sowed to wheat with which fertilizer was used. When the hand was

done drilling the wheat every fence post on both sides of the field was decorated with an empty fertilizer sack. While the decoration was quite attractive, yet it was not particularly beautiful, so I conceived the idea of making grist of what came to my mill, and gathering up all those fertilizer sacks I spread them under about a dozen apple trees in the orchard.

Each winter after the ground is well frozen we mulch the apple trees with straw which retards the trees blooming in the spring until all danger of frost is past. When we mulched that season we omitted the trees where the fertilizer sacks covered the ground except with a very light coat of the straw. Such a vigorous growth as those dozen trees made last year, fed by the fertilizer which clung to the sacks and was washed into the ground by the gentle rains and melted snows.

As is the case with many other kinds of work there is an individuality in the result of every man's tree surgery. My German neighbors fruit trees are broad and low branching and never allowed to grow tall. My neighbor on the right has English blood. His trees are lofty headed and the first limbs are from six to eight feet from the ground. All branches curve outward and then upward and all trees are kept severely trimmed that plenty of air and sunlight may circulate freely among them I should recognize the Englishman's pruning among a thousand.

In one of our farm fields are two apple trees still standing, all that is left of the original orchard that was set out in 1834 by my ancestor the year after he purchased the land from the government. Every season the trees bear at least a few apples which are of excellent quality. The one variety has always been called the house apple though I have no idea how the name originated. The other variety is, I think, one of the very best of apples, the old fashioned Vandever that is almost extinct now, but in our kidlet days it was one of the standbys and recognized as one of the best apples grown. I wonder that nurserymen allow such varieties to die out.—J. M. B.

Formula for Grafting Wax Using Linseed Oil

Rosin	- - -	4 lbs.
Beeswax	- - -	1 lb.
Linseed oil	- - -	1 pt.

Put into an iron pot, heat slowly, and stir until thoroughly mixed; then pour out into cold water and as soon as cool enough to handle pull like taffy until it assumes the appearance of that substance. Then work into sticks and put away in a cool place until wanted.

In using, it will have to be kept in a melted state. I usually knock the hinged top off of a railroad lantern, put a can without top or bottom in place of the globe, cut a few notches in the top to allow the smoke to escape, set another can containing the wax on top of that and fire up. The lower can should not be more than about three inches high. If properly constructed the wind will have no effect on the blaze, but these lanterns require a special kind of oil.

Wishing Mr. B. success, I am J. M. Sebring, Oregon.

Fruit Prospects

The fruit prospects for western New York are favorable at this date, May 13th. The season opened here two weeks earlier than usual, which led fruit growers to fear danger from late spring frosts. No killing frosts have occurred as yet, but it is possible they may appear later. I have known a killing frost to occur as late as the tenth of June, when I was a boy on the farm, which killed the corn which had been once cultivated.

Some complaints have been made about the falling of peach blossoms, but I think this is of no greater extent than usual. There have been no unusual attacks of insects. A good crop of peaches is expected, also of apples, plums, pears and quinces.

We hear that the peach crop of the south, particularly that of Georgia, promises a fair yield of fine fruit. The Georgia peaches come into market July, August and September.

About the usual amount of strawberries have been produced in the southern states and marketed largely in the north, but not in competition with home grown strawberries, which come in at about the date when the southern strawberries are all marketed.—C. A. Green.

How to F

A most is available States in tects issue culture at of informa it should from time the names most inter published readers in the Depart ington, D. the bullet of course, when mak The list g at this tim Name of E Home Mar fermente Cranberry Strawberry Canned F lies..... Tomatoes. The Home Canning V How to De Care of Fo Use of Pai Lawns and Farm Book The Stable The Farm Bird House

A Serv

For the Fruit Grow list of the ject. We s and numbe from our cover almo farm life. when you s In some ca bulletins di the number it from the application.

Notes fr

May 18— berries the hoe, cultiva duced this s owners will stir the soi raspberry p growth as t very carefu plants, as t A shallow pl dries in spr over the gr until say A ment for thi A Million is a low esti the other c counties sur this season.

How to Find Out What You Want to Know

A most valuable source of information is available to any citizen of the United States in the bulletins on important subjects issued by the Department of Agriculture at Washington, D. C. This source of information is not used, we think, as it should be. We have decided to list from time to time in Green's Fruit Grower the names and numbers of some of the most interesting and valuable bulletins published by the Department. Our readers may secure them by addressing the Department of Agriculture at Washington, D. C., and giving the number of the bulletin desired. It would be well, of course, to add the name of the bulletin when making request to avoid errors. The list given below is of great value at this time of year:

Name of Bulletin	Bulletin Number
Home Manufacture and Use of Un-fermented Grape Juice.....	175
Cranberry Culture.....	176
Strawberries.....	198
Canned Fruits, Preserves and Jellies.....	203
Tomatoes.....	220
The Home Vegetable Garden.....	225
Canning Vegetables in the Home.....	359
How to Destroy Rats.....	369
Care of Food in the Home.....	375
Use of Paint on the Farm.....	474
Lawns and Lawn Soils.....	494
Farm Bookkeeping.....	511
The Stable Fly.....	540
The Farm Kitchen as a Workshop..	607
Bird Houses and How to Build Them	609

apple along the roadsides, and with extremely few exceptions every apple tree in orchards near the roads, contained from one to twenty nests. If any one had attempted to burn or destroy any, there was no evidence of it. Some bushes and trees were entirely denuded of foliage, and although it is not likely that the trees and bushes will be killed, the effect is bad, to say the least. When the writer called the attention of one farmer to the matter, he remarked that it was no good for one to destroy them while others did not, so you see cooperation is needed even to get rid of pests that are destroying your own property and making the roadsides of your farm hideous (or rather that are likely to come in hundreds to one next year) because you can burn the nest out with a torch, or spray with an insecticide and thus rid your own grounds.

Crows may do some good, but when I see them taking the young robins from nests near the house, flying off with the eggs from a pheasant's nest down the lot, and discover that they have taken every egg from a sitting turkey's nest, I declare war and no crow is safe if I have a gun in hand at this time of year.

The Catbird has returned with his mate again, and outside by bedroom window, as soon as the dawn shows, begins his nightingale-like music. For ten years a pair of these birds have made their home and nest near the house, and no songster is more welcomed.—E. H. B.

Honest men are the gentlemen of nature.
—Bulwer-Lytton.



700 lbs. of Hubbard squash on plot of ground 20 ft. x 80 ft.

A Service to Our Subscribers

For the use of subscribers to Green's Fruit Grower we have on file a complete list of the bulletins on nearly every subject. We shall be glad to give the name and number of bulletins, upon request from our subscribers. These bulletins cover almost every practical point in farm life. Please enclose two-cent stamp when you send such inquiry to our office. In some cases we may be able to send the bulletins direct. If not we can give you the number and name so that you can get it from the Department without cost on application.

Notes from Green's Fruit Farm

May 18—I saw fifty acres of black raspberries the other day in which neither hoe, cultivator nor plow had been introduced this spring. This is too bad. The owners will surely lose by neglecting to stir the soil early in the season. After raspberry plants have put on as much growth as they now have, one should be very careful how they work around the plants, as the roots are near the surface. A shallow plowing just as soon as the land dries in spring, and the cultivator once over the ground every week afterward until say Aug. 15th, are reasonable treatment for this fruit.

A Million Nests of the Tent Caterpillar is a low estimate of this pest that I saw the other day. Ontario and Steuben counties surely have a scourge of them this season. Every wild cherry and wild

Grand Traverse Fruit Prospects & Produce Exchange

There having been no hard frost this spring to thin the fruit buds on the orchard trees, the indications are that, unless something is done, the fruit crop will be much larger than has ever before been known in Northwestern Michigan. While there have been killing frosts in the southern part of the state, the counties in the northwestern corner have seen nothing in the nature of a killing frost since about the middle of April. In consequence nearly all the fruit trees are heavily loaded with buds, blossoms and developing fruit. Much thinning will have to be done in order that the individual cherries, peaches and apples may be of a size to demand a reasonable price.—R. H. Elsworth.

Cover Crops in Orchards Are More Important Than Generally Supposed

I desire to impress upon readers of Green's Fruit Grower the fact that enough has not been said about the importance of having some kind of a crop growing in orchards after the frequent cultivations given in spring and early summer. In July, never later than the last of July, cultivation should stop in the orchard and berry field with the exception of strawberries, which must be weeded and looked after throughout the growing season.

At the last cultivation, say July 15, do not fail to sow some kind of crop in your orchard, whether it be apple, pear, peach, plum, quince or cherry.

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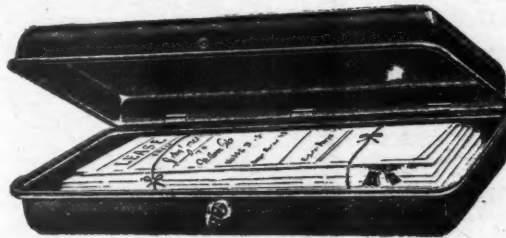
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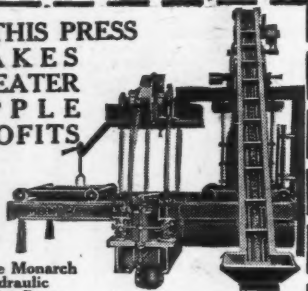


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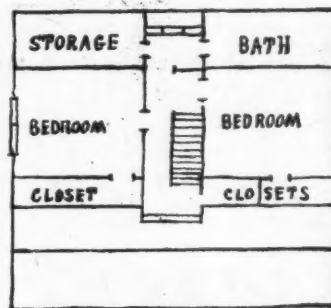
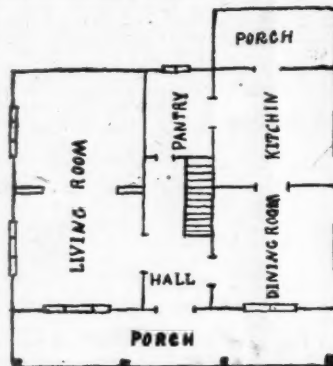
Green's Fruit Grower:—In the February number of Green's Fruit Grower a reader asks for a suitable farm home of the bungalow type, capable of being built of stone, not too large and possessing room for modern conveniences. The writer is enclosing herewith a sketch of an ideal country home of the bungalow type, but departing from the regulation bungalow in that the bedrooms are placed on the second floor. This type of house is more commonly known as the cottage-bungalow and is more suitable to northern states than the more open bungalows of the California and Florida types where climatic conditions render the heating system less complicated. The northern home must take into consideration the cold wintry days when it is necessary to keep every room comfortably heated at a minimum cost for installation and upkeep.

Simplicity of construction and at the same time a due regard for the expense of

cellar. The upstairs arrangements of such a house, which can be built large or small, according to the needs of the owner, would include two large bedrooms and a bathroom. If desired the large living room could be divided by a bookcase or pillar partition extending out from the wall a few feet on either side, and made into a combined living room and library, den, sewing room, music room or extra bedroom.

Necessarily the kitchen of the small farmhouse should be larger than that found adequate in the suburban cottage-bungalow. Much of the work on the farm, especially during butchering, canning, preserving and wash-day periods, must be done in the kitchen, hence it should be of ample size. For convenience sake the tables, sink and other equipment should be located in close proximity to the range in order to do away with the taking of too many unnecessary steps.

A fireplace would add greatly to the beauty of the living room, but it could be



building must be considered in the construction of the small country home. The cold, bleak, uninviting two-story monstrosities so often seen, together with their narrow and useless porches and needless ornamentations, such as bay windows, brackets, filagree work, etc., are not the kind that best fits the needs of the man whose purse is limited and who desires "something different" in the way of a home that combines beauty, simplicity and durability.

The interior plans of such a home as is pictured herewith are left to the taste of the builder; but the man of the farm should see to it that the wife's wishes are consulted and the house built as she wants it. It is to be her world, day in and day out, through sunshine and shadow, year after year. See that it suits her.

Such a house should have a living room extending the entire length of the side commanding the finest view of the farm and the surrounding country. Arrange for ample window space. A hall, not too wide, should separate the living room from the other half of the downstairs, consisting of dining room and kitchen. Stairs should lead from the kitchen to the

dispensed with. By all means install a heating plant. The ultimate cost, not to mention the doing away with the endless winter job, "lugging in" the coal, will be much less than the placing of stoves in the various rooms and the consequent ruin of rugs and carpets from the dirt, ashes and muddy boots. Such a house as is pictured here presents the most simple problems for the installing of a heating system for the down- and up-stairs rooms.

The inquirer in Green's Fruit Grower is fortunate if he can secure stone with which to build his house right at home and without cost other than the hauling. Brick, wood or concrete would be equally attractive in the construction of this bungalow-cottage farmhouse.

The ideal small farm house should have a wide porch, with strong lines. The pillars should be of the same material as that with which the lower story is constructed. Avoid the round, fancy, spindly posts and ginger-bread trimmings. Let the country home possess individuality and cause every person who passes it to turn and give it a second look. Keep the lines close to Mother Earth and

do not neglect those things that transform a "place to live" into a home—flowers, trees and shrubbery. The porch should be at least eight feet wide and made roomy enough to accommodate the husband's farmer friends, the wife's neighbor women, the boys' and girls' associates, a porch party, a Halloween gathering or a gathering of the church sewing or missionary society. Avoid the four or five foot frill or ruffle that so frequently "ornaments" the space about the front door and is called a porch. Make it a "real" porch.

Consult the wife about the windows and the closets and let her have her own way. She will not go far wrong. Even if she does make a mistake, the man of the house will never hear about it. If the mistake is his—well, that's different.

Have the cellar excavated under the entire house and divide off a part to be used as a storage room for the fruit, canned stuff and winter vegetables. The partition walls and windows will give it the necessary ventilation and temperature. Other parts of the cellar can be used for the storing of coal, kindling and furnace equipment. The writer believes such a bungalow-cottage as is here pictured will give lasting satisfaction.—V. King Pifer, Williamsport, Pa.

Importance of Farming

1st. Is farming of any other importance than the mere existence and support of the farmer and his family?

2nd. Is farming classed as a trade?

3rd. Is every one capable of being a farmer?—asks West Virginia Farmer.

Not every one is capable of becoming a farmer. Neither are all men fit for doctors, lawyers or merchants; and in the language of "Whittier," "Many a good preacher was ruined to make a poor tiller of the soil, and vice versa." A man, to make a good farmer and to be successful at his trade must take an interest in his profession and trade. Now I wish to ask one question and I will also give my idea as to answer and hope to hear from others who are more qualified as a farmer than I am. My question is this: Why is it, that the farmers of West Virginia do not make more of a success at farming, than most of them do?

A man can not make a success of farming if he has to stop his work in his own crop to work in some-one-else's corn to get money to live on. It is not always the poor farmer's fault that this is the case. So many of our farmers are poor and do not own a horse to farm with and consequently have to depend on others to get their plowing done and in pay for such borrowed services he must bind himself to work for the man, who does his plowing, at any time he shall (the man he owes) desire him to do so.

Farm Facts

By Peter Radford

Cheap money will solve many of the farmer's problems, says Lecturer of National Farmers' Union.

There is not enough of the community spirit among our rural districts.

Success in farming depends largely upon proper marketing methods, cheap money and co-operation.

Something is wrong in our marketing system when a small crop brings more money than a bountiful one.

Co-operation between practical farmers and proficient business men will eliminate ignorance and prejudice.

The highest duty of State and Federal Governments is to place agricultural education within the reach of all.

The farmer cannot be helped until he organizes, and the Government can best help the farmer through organization.

By co-operating with his neighbor the farmer can learn new methods of culture and the interchange of ideas will benefit both.

The Nation's menu must be made up from the fields, pastures, orchards and gardens, and to farm intelligently the farmer must know what is needed.

Why Not Get It.

In Green's Fruit Grower March 1915, two articles appear which are worth many times the price of the Fruit Grower for many years.

One is from McCue in Practical Farmer, and the other is from U. P. Hedrick, Massachusetts State Board of Agriculture.

Get Green's Fruit Grower and read it.—J. N. Bartels, Colo.

The f... making... handled... the farm... it would... a small... cream... be fed in... the crea... ditions t... of cream... lutely w... bered wi... of fat in... in churn... the separ... cream in... held at... hours. ... for the c... cream w... cooled a... Now c... cess. C... three da... flavor wi... into the... quality. ... obtained... should b... ripening... at this t... changed... thick gra... lifeless a... appearance... hold at... time of c... temperat... It is ver... and aging... the yield... greatly r... is churne...

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BUTTER MAKING ON THE FARM "Does It Pay?" Answered in the Affirmative

The first important step in the butter making process is to see that the cream is handled with care, says N. Y. Packer. If the farmer has at least three average cows it would be a paying investment to buy a small sized cream separator. When a cream separator is used the skim milk can be fed immediately while it is warm and the cream held under more desirable conditions than when the old gravity system of creaming is used. Unless it is absolutely necessary never try to churn clabbered whole milk because of the great loss of fat in the buttermilk and the difficulties in churning such a bulky product. When the separator is used never run fresh warm cream into the old cream that has been held at a low temperature for several hours. Keep at least two receiving cans for the cream, and then pour the fresh cream with the older after it has been cooled and both stirred vigorously.

Now comes the ripening and aging process. Cream should not be held more than three days before churning because a stale flavor will develop, and this is carried on into the finished product and injures the quality. As soon as enough cream has been obtained for churning, the temperature should be raised to 70 degrees so that the ripening or souring will take place. Hold at this temperature until the cream has changed from a thin liquid condition to a thick granular condition and from a dull lifeless appearance to a bright glossy appearance. Then cool immediately and hold at a very low temperature till the time of churning. This holding at a low temperature is called the aging of cream. It is very important that this ripening and aging be done very carefully because the yield and quality of the butter are greatly reduced if old, thin, sweet cream is churned.

Disease Among Cattle Virtually Wiped Out

While confident that the foot and mouth disease which has been epidemic among the live stock of the country for the past six months virtually has been wiped out, department of agriculture officials declared to-day that they would not relax their efforts to prevent a future recurrence of the scourge. All the infected animals are said to have been killed and buried, but officials are not sure that all possible means of conveying the infection have been destroyed. For this reason, it is expected that there will be still other sporadic cases of the disease, yet it is asserted that if preventive measures are promptly resorted to there need be no fear of further serious spread of the malady.

Altogether more than 124,000 animals have been killed because of the epidemic at a cost of between \$5,000,000 and \$6,000,000, the expense of which has been shared equally by the Federal and state governments.

Bees and Fruit Growing

It has seemed to me that the men in Maine who have good orchards or land suitable for orcharding, and have neglected this branch of farming to take up potato growing, are making a mistake. There are exceptions, of course, says Maine Farmer. The man who has no liking for an apple tree or bushes that bear fruit is doing right, I think, to leave their culture alone and take up something more to his liking. But I believe this, that the same amount of effort expended in growing and properly marketing apples in Maine, outside of Aroostook, will bring larger cash returns and much more in real pleasure and peace of mind, than will the growing of potatoes.

I am inclined to the view that the apple grower could profitably pay more attention to the marketing of his crop.

Thirty to fifty years ago, the humble bee was found in large numbers in most parts of the state. Today there are but a few, except in a few favored localities. In the early days of Aroostook county the growing of red clover seed was quite an important industry and was quite a profitable one some years. For some years past, this has not been a profitable crop, as the heads do not mature enough seed for a paying crop. And it is the lack of these humble insects, the humble bee, which is entirely responsible for the difference of three and four hundred pounds of seed per acre thirty-five

years ago, and one hundred pounds or less, which may be secured today.

While the apple grower may secure a paying crop of fruit without the presence of honey bees some years, there are other years when with a full bloom little fruit is set. Many times, had these been present in sufficient numbers in those off-years, a paying crop would have matured. With a favorable winter and spring, wild bees and other insects will be quite plentiful and assist largely the work of pollination in the orchard. In other years, there are too few to be of importance.

Bees are sometimes accused of injuring fruit by puncturing them to get the

juices. This, however, bees are unable to do. They will work on fruits that have been punctured by birds, wasps, or other insects, or on decaying fruit late in the season, when there is no nectar to be found in the natural sources of the flowers.

I have crushed bees when they were at work on over-ripe raspberries, and found the honey sacks filled with red juice of the berries. They will not trouble berries so long as they are firm and in marketable condition. The small fruit grower need feel no anxiety when bees are quite numerous in the fruit patch. They will not sting at such times unless they happen to be accidentally jammed when picking

the fruit. If they seem at times to be something of a nuisance, remember they have no doubt increased your crop many quarts. The grower of small fruits, both the bush fruits and strawberries, needs the bees among the blossoms to fertilize them and cause them to fruit fully as much, if not more, than the apple and pear grower.

February 1, 1915.

Mr. Chas. A. Green,

Dear Sir:—Green's Fruit Grower is the best paper of its kind I have ever read, and I have read many.—Wm. S. Frost, Ill.

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At Our Risk. Then if pleased you can keep it and pay only a little each month out of your extra cream profits until the machine is paid for. In this way the separator itself will earn its own cost—and more before you pay. You won't feel the cost at all. If you do not need a large capacity machine you can obtain a smaller one on payments as low as

Only \$2 a Month

No Interest To Pay—No Extras

The prices we quote include everything. You have no extras to pay—no interest. You buy direct from the manufacturer and save nearly half. We give **30 days' trial** on your own farm. During this time if you don't find the New Butterfly the lightest running, easiest cleaning, and best all around separator on the market (regardless of price) you don't need to keep it. Just send it back at our expense and we will refund what you paid, including all freight charges both ways.

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Over 30,000 New Butterfly Cream Separators are now in use. No doubt some of them right in your own neighborhood. We have been advertising in this paper for years—the publishers know us and know we do just as we agree. Read these letters from just a few of thousands of satisfied owners:

Seven Years Old—Runs Like New

"The Butterfly Separator we purchased of you about seven years ago is still doing fine work. I recently took it apart and cleaned the gears with coal oil. Now it runs like a new machine and works as well as ever."
H. S. Stonebraker,
Kokomo, Indiana.

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"We would not do without our Butterfly Separator or exchange it for all the other machines we have seen. Our little girl, 12 years old, runs it like a clock."
Mrs. P. E. Rude,
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Point Aux Pins, Mich.

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"We don't see how we got along without the New Butterfly as long as we did. It runs lighter, is easier washed and kept clean than the higher priced machines in this neighborhood."
R. E. Morrison,
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Why not get one of these big labor-saving, money-making machines while you have the opportunity to do so on this liberal self-earning plan? Let us send you our big new illustrated Catalog Folder showing all the machines we make and quoting lowest factory prices and easy payment terms. We will also mail you a book of letters from owners telling how the New Butterfly is helping them make as high as \$100 a year extra profit from their cows. Sending coupon does not obligate you in any way. Write today.

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Illuminating Electric Mfg. Co., Philadelphia, Pa.

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No display advertising will be placed in this department and no type larger than 6-point. The first three words only to be printed in capital letters. Each abbreviation and number will count as one word. Rate 10 cents per word for each insertion. No advertisement inserted for less than \$1 per issue. We cannot afford to do any bookkeeping at this rate. Cash must accompany every order. Orders must reach us not later than the 15th of the month previous to the month in which the advertisement is to appear.

Terms: CASH WITH ORDER.
Green's Fruit Grower Co., Rochester, N. Y.

HELP WANTED

WANTED—Men to get members and establish lodges on commission basis for the Owls, South Bend, Indiana.

THOUSANDS JOBS OPEN to Men—Women. \$75 month. Vacations. Short hours. Steady work. Common education sufficient. Write immediately for list U. S. Government positions now obtainable. Franklin Institute, Dept. W-147, Rochester, N. Y.

WANTED. Men and women to qualify for Government positions. Several thousand appointments to be made next few months. Full information about openings, how to prepare, etc., free. Write immediately for booklet G-1146. Earl Hopkins, Washington, D. C.

FARMS WANTED

WANTED—To hear from owner of good farm or unimproved land for sale. H. L. Downing, 113 Palace Bldg., Minneapolis, Minn.

FARMS WANTED. We have direct buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property free. American Investment Association, 32 Palace Bldg., Minneapolis, Minn.

FOR SALE

DUROC PIGS. \$16 pair, ped. S. Weeks, DeGraff, Ohio.

CHICKS \$7.00 100; eggs 22 \$1.00, \$4.00 100. Booklet. Empire Poultry Farm, Seward, N. Y.

VIOLIN FOR SALE cheap. Sent on trial. Write Miss Bertha Maddiss, Route 5, Rosedale, Kansas.

PEONY SPECIALIST for 30 years. Send for catalogue. J. F. Rosenfield, Peony Gardens, Omaha, Nebraska.

DAY OLD CHICKS for sale. 13 varieties, hatched strong and healthy from pure bred stock. Catalog free. Old Honesty Hatchery, Dept. G, New Washington, Ohio.

REAL ESTATE FOR SALE

SELL YOUR PROPERTY quickly for cash, no matter where located; particulars free. Real Estate Salesman Co., Dept. 22, Lincoln, Neb.

At Lindcove, Tulare Co., Calif. 400 acres of very choice orange or lemon land for sale. In lots of 5 or more acres. Developing orange and my specialty. I live on the land. For further particulars call or write A. G. Griswold, R. F. D. Lindcove, Exeter, Calif.

An Important Orchard Meeting

About three hundred fruit growers attended the meeting held in the orchards of Jacob Jungbluth near Spencerport, N. Y., the other day, which was largely devoted to an experiment in dusting and liquid spray in the orchards. This experiment was conducted by Professor Donald Reddick and Professor C. R. Crosby, both of Cornell. Dr. E. P. Felt, New York State Entomologist, and Mr. Lewis A. Toan, Director of the Monroe County Farm Bureau, were also in attendance. While the result of the experiment remains to be seen, the demonstration of the two methods of spraying was of great interest. The dusting can be done in shorter time, and load to be drawn through

three large orchards on the place, which would seem to be enough, practically every acre of the balance of the farm was planted to young trees with other crops, of course, growing between the rows. This shows a faith in the future of fruit growing. Mr. Green remarked the other day that fruit growing was still in its infancy. We hope to give the result of this experiment to our readers in a later issue.

An Experiment in Thinning

F. M. Clement, Vineland, Ont.

An experiment conducted at the Vineland Experiment Station during the summer of 1914, in the thinning of apples, is of special interest. Forty-six trees in our old orchard were admirably adapted



Orchardists and farmers attending the demonstration at the farm of Jacob Jungbluth.



Applying the Dust Spray.

the orchard is very much lighter than the liquid spray rig. The farmers in the East have done very little dusting, though the interest in this method has received considerable attention at the horticultural meetings and other gatherings of fruit growers recently. We give here with photographs of the two rigs in operation by experts at this meeting.

It is interesting to note that there were nearly fifty automobiles at this meeting which indicates that fruit growers are well equipped for whatever may come along. The writer also noticed that with

to such an experiment. The varieties were largely Baldwins and Greenings, and this year as a whole they were heavily loaded. Twenty-six of the trees were selected at regular intervals and thinned, care being taken to leave the fruit well scattered over the tree and in as perfect balance as possible. An average of 3,191 apples were removed from each tree. We aimed to leave only one apple to a spur and often not that if there was any likelihood of the fruits touching each other when they had attained full size.

The work was done from July 8th to

16th, when the fruit was about the size of a shelled walnut and smaller. Thinning shears purchased from E. A. Franz, Hood River, Oregon, at a cost of thirty-one cents a pair, were used to cut the stems rather than pulling off by hand. Five and three-quarters days for two men, or eleven and a half days for one man, were required to do the work, at a cost of one dollar and seventy-five cents a day. This is an average cost of seventy-seven and four-tenths cents a tree. The fourth of this time was used in picking up and counting the apples, which is equal to nineteen and three-tenths cents a tree, leaving fifty-eight and one-tenth cents net for the commercial thinning of the tree. The twenty-six thinned trees yielded a total of forty-eight and seven-tenths barrels of firsts including fancy, fifteen and one-tenth barrels of seconds, and twenty and six-tenths of culls. The culls included all the windfalls. This gives an average of 2.46 barrels a tree, which are worth \$1.90 f.o.b., or \$4.66 per tree, f.o.b. The twenty unthinned trees yielded 25.4 firsts, 23.6 seconds, and 23.7 culls, including windfalls. This again is an average of 2.46 barrels per tree. At \$1.90, the return per tree is exactly the same for thinned as unthinned. The firsts sold the seconds, but on an estimate of \$2.25 for the first and \$1.70 for seconds, we have a return of \$5.20 for the thinned trees and \$4.86 for the unthinned trees, a gain of 34 cents per tree in favor of the thinned. A fairly accurate record of the time required to pick and pack the thinned trees gave again an average of six minutes per tree in favor of thinned trees for four men, or twenty-four minutes per tree for one man. This at \$1.75 per day is worth seven cents, making in all a gain of 41 cents in favor of the thinned. The net cost of thinning was 58.1 cents per tree all told, making a cash loss of 17.1 cents per tree.

Three other factors we must consider: First, a share of the firsts were fancy and might have been sold for more money if sold alone; second, it is doubtful if it is good policy to put seconds on the market at all this year when there is an abundance of first and fancy.

SPRAYING APPLE TREES NETS \$161 ACRE PROFIT

Experiments of College of Agriculture Prove Value of Protecting the Fruit

Insects are high livers. On an acre of apple trees they may destroy a hundred dollars' worth of fruit.

This has been brought home to the Missouri fruit growers in the last two years by a series of experiments carried on by the College of Agriculture of the University of Missouri. The average value of the fruit of an acre of unsprayed apple trees was found to be \$18.05. Four careful sprayings made this value jump to an average of \$187.19 an acre.

On one orchard in 1913 the net profit due to spraying was found to be \$161.12 an acre.

The average cost of a tree of the first spraying was 6.6 cents, 13 cents for the second, 9.5 cents for the third and 8 cents for the fourth, a total of 37.1 cents a tree, or an average of \$22.26 an acre.

These demonstrations were made by professors of the Department of Horticulture of the University in co-operation with Missouri orchardists. The work was carried on in 14 counties: Barry, Boone, Buchanan, Cape Girardeau, Clark, Clay, Cooper, DeKalb, Greene, Jackson, Laclede, Lafayette, Lawrence and Marion. Orchards in different communities were chosen for the work, and the persons living in those communities were notified of the day on which the work would be done. From 15 to 20 orchardists attended each meeting.

"Able-bodied men between the ages of 18 and 45," demanded as sacrifices by the Moloch of War, are the potential forefathers of future generations. With every soldier killed in battle dies the possibility of four children, sixty-four grandchildren, and 256 great-grandchildren, so that but three generations later there is a regiment of more than 1,000 unborn human beings whose shadowy non-existence offers a standing reproach to the folly that prevented them from coming into the world. Multiply the results of this isolated case by thousands, and the loss to a nation becomes the more terribly obvious.—Brooklyn Eagle.

After-Harvest Treatment of Strawberry Plants

Written for Green's Fruit Grower by J. S. Underwood, III.

ALL of us who are experienced in the growing of strawberries know that after the crop is harvested the plants require special cultural attention if they are to remain for the production of marketable fruit the succeeding year. The limited cultivation which is possible while the crop is developing in the spring is not sufficient to keep down weeds, so that under ordinary conditions these are present in a liberal number and generous size and demand removal by the time we can get to them after we have harvested the crop of berries.

Old plants that have spent their energy will only obstruct the chances of those that will produce fruit next season. These need to be cut out with the weeds. The soil, stirred but little and packed hard by the repeated trampings of the pickers, is in a poor state to begin the growth of new plants and ripen another crop of fruit. Deep and frequent cultivation is the only way to put this soil in proper condition, and if it is lacking in the essential elements of fertility there should be added

rake them into heaps and remove them from the field (this being done before plowing), as they are quite sure to contain weed seeds and disease spores in greater or less quantities. Of course a mowing machine will cut the plants and weeds close to the ground, and in large fields it is the machine to use, but in a small patch a common scythe can be used for the purpose. This litter, which includes the straw used for protecting the plants in winter, will make a good mulch for trees and berry bushes that cannot be cultivated.

In some instances fire may be applied to the litter and the field burned over, but, needless to say, this is heroic treatment and often proves fatal to the plants, and especially where there is a heavy growth of vines and a considerable amount of straw-mulch still remaining on the ground. True, the fire is quite sure to destroy any disease that may infest the soil or plants, but a good deal of judgment must be used in the matter of clearing the litter with fire. If fire is used it should in all cases be a "flash" fire, that is, a very quick one.

When manures and mulches are applied to the strawberry plants great care should be exercised to see that they are free from grass as well as weed seeds. Where grass

Summer and Winter Pruning

By W. L. McKay in N. Y. Sun

In managing apples and pears checking the wood growth of side shoots on the leaders in summer induces the development of fruit buds which will bloom the following spring. These buds form on short lateral branches or fruit spurs borne ordinarily on wood at least one full year old. Pinching back, however, may cause these fruit spurs to form on wood of this year's growth. Next year's fruit, therefore, will bear on wood either a year old or older. There is a tendency for these fruit spurs to produce fruit every other year, the year between being occupied with producing wood growth instead of fruit. This is the tendency with most fruit trees.

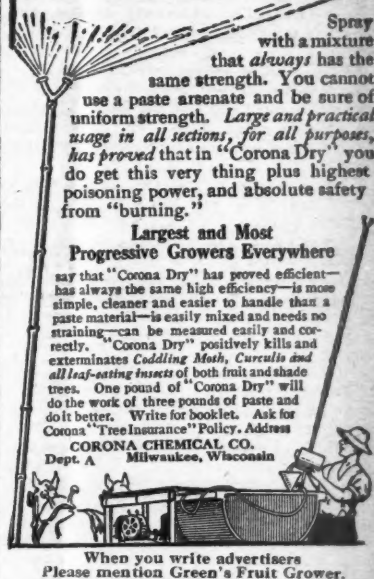
With cherries and plums a repression of wood growth induces early fruition the same as with apples and pears. The fruit spurs commonly develop on wood a year old or older, but may be forced to form on wood of this year's growth. The fruit, therefore, may bear on spurs growing on wood one full year old or older. Japan plums are especially liable to produce fruit buds on the current year's growth.

The peach does not bear on fruit spurs, differing thus from the apple, pear, plum and cherry. Fruit buds form on this year's growth and bear fruit next year. Very often on wood two years old or more short fruit bearing shoots develop, but these usually bear only once and are not true fruit spurs.

"CORONA DRY" Arsenate of Lead

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Eliminates guesswork. Standardizes the strength of the spray mixture. Saves work in mixing—no straining needed.

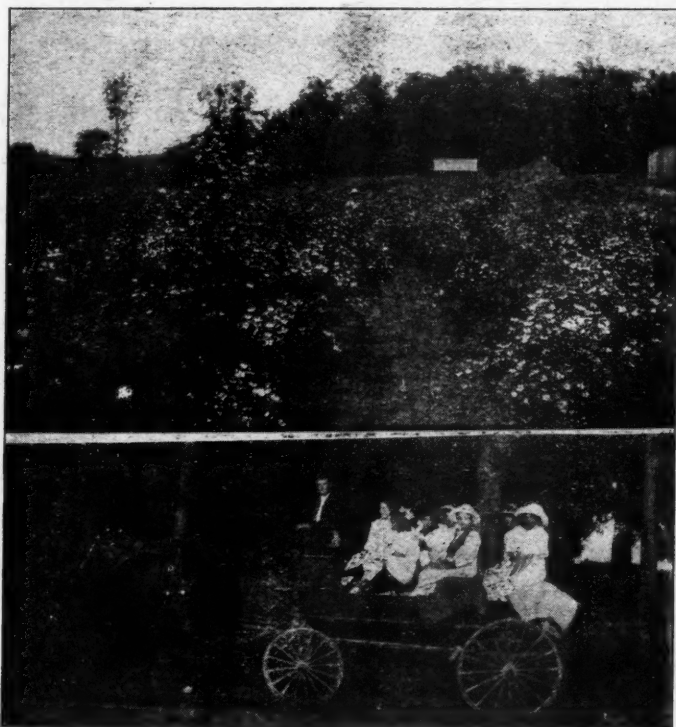


Spray with a mixture that always has the same strength. You cannot use a paste arsenate and be sure of uniform strength. Large and practical usage in all sections, for all purposes, has proved that in "Corona Dry" you do get this very thing plus highest poisoning power, and absolute safety from "burning."

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say that "Corona Dry" has proved efficient—has always the same high efficiency—is more simple, cleaner and easier to handle than a paste material—is easily mixed and needs no straining—can be measured easily and correctly. "Corona Dry" positively kills and exterminates Coddling Moth, Curculio and all leaf-eating insects of both fruit and shade trees. One pound of "Corona Dry" will do the work of three pounds of paste and do it better. Write for booklet. Ask for Corona "Tree Insurance" Policy. Address CORONA CHEMICAL CO. Dept. A Milwaukee, Wisconsin

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The upper photograph gives a view of an Eldorado blackberry plantation in blossom. Eldorado is one of the best of the hardy blackberries. Every fruit garden should have a few blackberry plants, for no fruit is more highly prized by the housekeeper for pies and jams and for eating fresh with cream and sugar. Blackberry bushes spread wide, therefore leave plenty of room between the rows. The lower photograph represents the Allison family on their way to a picnic. Photographs from Allison Bros., Columbus, Ind.

and worked into the soil a quantity of well rotted barnyard manure or commercial fertilizers, if the former is lacking, or both, in order to replenish the plant food taken out by the last crop. After this has been done the old crowns will send out runners in every direction. If these are permitted to establish themselves at random, it will be but a short time until all trace of the old rows is obliterated.

The prevention lies in training the new plants into rows corresponding to those occupied by the old plants. This is done by following a special method of culture. I run a one-horse plow about six inches from the center of each row on both sides, throwing the soil away from the row, thus leaving an undisturbed portion one foot wide. With a hoe the weeds are removed and the runners pulled around so that the plants developing from them will be on the narrow strip unplowed. Thus they are confined to the row, and cultivation is permitted to the end of the season. In the cultivation that follows, a rolling cutter fastened to the side of the cultivator will sever all new runners that attempt to grow into the spaces between the rows and thus keep the spaces clean. This stirring of the soil provides conditions for the development of sturdy plants.

It pays to cut the tops of the old plants,

becomes well established among the strawberry plants the field should be plowed and used to grow some vegetable crop, such as potatoes, for a couple of years, which will destroy the grass as well as weeds. The secret of growing good strawberries cheaply is that of planting them on land that is well supplied with fertility. The rows should be kept free from everything but strawberry plants. Grass and weeds are a great hindrance.

Too many strawberry plants should not be allowed in the matted row. They should not be closer than six inches to make a strong, vigorous growth and produce berries of a good marketable size. Where the plants exhaust the supply of fertility and moisture the fruit is quite sure to suffer in quality and quantity. Plants that go into the winter in a strong and vigorous condition are very sure to make a profitable crop the following year, provided they are protected and well cared for during the winter. Timely and also intelligent care is required to insure big and profitable yields of the strawberry.

Mr. Chas. A. Green,

Dear Sir:—I have read your Fruit Grower for a number of years. It is the best all round fruit paper I have ever seen.—J. C. Swayne, O.

Seed Orchards With Cover Crops



Successful fruit growers practice clean culture by frequent cultivation until about August first. Then some cover crop is sown. Usually this is the best orchard system, as it keeps the trees in better growing condition, results in larger yield and affords better control of insects and fungous growths. It also prevents any great danger from root freezing.

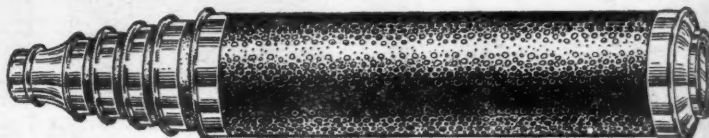
Use the Eureka Riding Mulcher and Seeder

Made in three sizes 8, 10 and 12 ft. wide. Sows broadcast clover, alfalfa, timothy, rye, wheat, oats and similar seeds. Accurate and adjusts for various quantities. Teeth cover the seed to any depth desired. Used in large quantities for 11 years. Easily operated. Low price. Send for free catalogue.

Machine can be used also for various other farm operations.

Eureka Mower Company, Box 1000, Utica, N. Y.

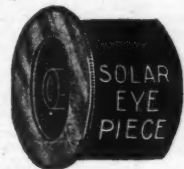
The New Excelsior Telescope



WITH SOLAR EYE PIECE

FRUIT FARMERS are more and more each year bringing Scientific instruments into use about their farms, both for profit and pleasure. It is conceded that the foremost among farmers are GREEN'S FRUIT GROWER readers. A good Telescope, like the excelsior, will pay for itself on a farm over and over again. It enables the farmer to inspect fences, count stock and take note of what his employees are doing at a distance; to say nothing about the pleasure and information to be gained for the whole family by viewing landscapes while on excursions to mountains or the sea, studying the sun-spots or eclipses by the use of the Solar eye-piece or dark lenses.

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Pat. April, 1900.

This is a long, powerful Telescope for terrestrial and celestial use.

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By a very little pleasant effort any man, woman or child can get four of their friends or neighbors to subscribe for GREEN'S FRUIT GROWER at our special introductory price of 35 cents. Go out and get four new subscribers, send us only one dollar, keep the extra forty cents. We will then send you the complete Telescope all charges paid. DO IT TO-DAY while the special offer lasts. Address

Green's Fruit Grower, Rochester, N. Y.

The Greatest Woman

A question was put to 200 school teachers, "Who was the greatest woman in all history?" The teacher who received the prize for her unique answer passed Queen Victoria, Frances Willard, Helen Gould, etc., and said, "The wife of the farmer of moderate means who does her own cooking, washing, ironing, sewing."

To remove the odor from the hands after peeling or cleaning onions, rub well with baking soda, then rinse. The same treatment will do for the knife used in peeling onions.

When making starch, try using soapy water instead of the plain water. This will give a much better gloss to the clothes and the irons will not stick.

Breadboards and other kitchen utensils made of wood may be kept clean, white and stainless by rubbing with soap and lukewarm water, to which may be added a little common soda or household ammonia.

Graham Biscuit.—Two cups graham flour, one cup white flour, one tablespoonful sugar, two tablespoonfuls lard or shortening, three teaspoonfuls baking powder, one small teaspoonful salt. Milk to make a soft dough.

Mix graham and white flour and sift well. Add salt, sugar and baking powder. Rub lard in quickly; last add milk and roll to medium thickness. Bake in quick oven.

In picking strawberries it should be borne in mind that bruised fruit will not stand shipping. A careless picker has no place in a strawberry field.

10c Embroidery Bargain 10c

This handsome 5-piece Violet Table Set stamped on Jersey Art linen sent prepaid for one dime. Special offer to introduce our new catalogue of fancywork goods.

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Send 10c in silver or stamps for our Up-to-Date 1915 Large Spring and Summer Catalogue, containing over 400 Designs of Ladies', Misses', and Children's Patterns, as well as the latest Embroidery Designs, also a concise and comprehensive article on dressmaking, giving valuable hints to the Home Dressmaker.

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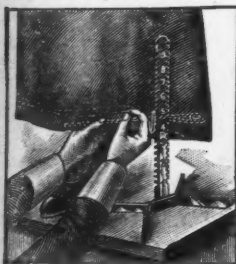
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Indispensable to the Well Dressed Woman



HANDIEST help ever invented for home dressmaking, as it assures absolute accuracy and style in the correct "hang" of the skirt. It can be adjusted to any height and easily used by professional or beginner. Heretofore all skirt gauges were only skirt makers, but the EZY-HEM enables a woman to turn the skirt the right length and pin it up all ready to hem, thus reducing the work of measuring, marking and turning to a minimum. It prevents expensive mistakes, saves time, work, worry and more than its cost on the first skirt made. It is made of nicely polished, nickel plated steel and will last a lifetime. It is also an excellent chalk marker.

DIRECTIONS.—Set gauge on the floor so that the skirt will fall over the long wire, making it come under or inside of the skirt. Fold the goods under, so that the long wire will come inside the fold, as shown in illustration No. 1 and pin the hem in place. Slide the gauge along and repeat. The Ezy-Hem can easily be used as a chalk marker also. Place the gauge with the long wire finger outside and against the goods, and simply draw chalk along the wire lengthwise, using the wire as guide or rule.

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Woman's Dept.

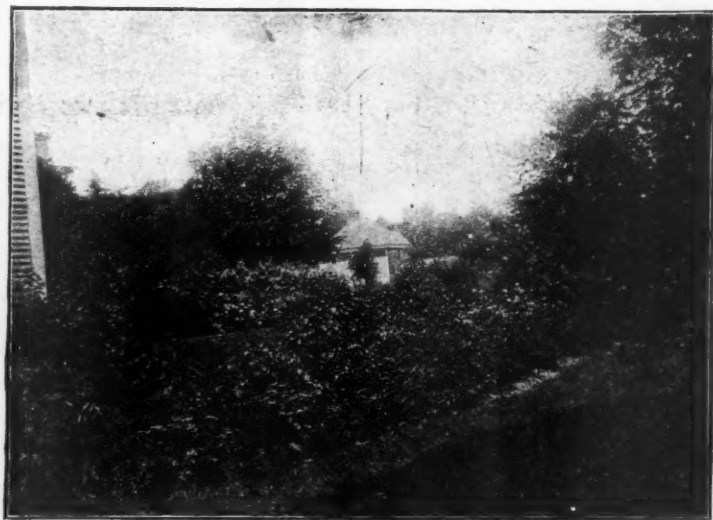
The Wholesome Raspberry

Editor Green's Fruit Grower:—The raspberry is not only a delicious fruit, but a wholesome one as well, possessing acid qualities that have a tonic and beneficial effect on the system during the sultry days of summer. There are a great many dainty and delicious ways of serving them. They make a very nice luncheon dish simply heaped in a glass dish with a small quantity of finely chopped ice over them, and served with sugar and good cream, or with lemon juice and sugar. Another nice way to serve the fresh fruit is place a layer of red raspberries in a glass dish, sprinkle with sugar, pour over a little cold custard; then put in another layer of berries, sugar and custard and repeat until the dish is full. Spread the top with whipped cream and set on ice until chilled. The red raspberries make a nice filling for cake. Follow any good sponge or plain white cake recipe. Mash a pint of the red raspberries and whip in a half cup of sugar. A little whipped cream can be used with the berries if desired. After the cake has cooled spread with the berries. On the top of the cake spread whipped cream, and place a few perfect whole berries here and there. Red raspberries go particularly well with

while soak for the same length of time a half box of gelatin in a half cup of cold water. Whip a pint of cream to a stiff froth. When ready to make up pour a half cup of boiling water over it, add the raspberry pulp and juice and place the bowl in a cool place in a pan of cold water or cracked ice if you have it. When cold and beginning to thicken fold in the whipped cream; then pour into a pretty mold and set aside to cool. Turn out and heap whipped cream around it.

Raspberry Pudding.—Make a batter with one cup of sour milk or cream, one egg, one-half teaspoonful of salt, one tablespoonful of sugar and enough flour to make a rather thin batter. Dissolve a level teaspoonful of soda in a little water and add to the batter; then add a cup of raspberries. Pour into greased pudding dish and bake. Nice served with cream or sauce.

Raspberry Tarts.—Follow any good puff paste recipe, roll thin and line tart tins with it. These can be filled with dry rice to keep them in shape if desired. Fill the shells with sweetened raspberries, bake, cover the tops with a meringue made out of the whites of eggs and a little powdered sugar.



View in Highland Park near the office of Green's Fruit Grower, Rochester, N. Y., shows method of planting shrubs to partially conceal buildings.

currants and we give a recipe or two below where they are combined very acceptably.

Raspberry Gelatin.—Dissolve three ounces of gelatin in a little cold water, squeeze the juice from one cupful of red currants into it, sweeten to taste with powdered sugar. Put one pint of ripe red raspberries into a bowl, pour the gelatin over and when it begins to thicken pour into a mold. Turn out when cold and serve with whipped cream.

Raspberry and Currant Frappe.—Mash together a quart of red raspberries and a pint of currants, sweeten with two and a half cups of sugar, and let the mixture stand in a cool place for several hours. Strain through a fine sieve and freeze to a mush. When ready to serve fill sherbet glasses half full, then heap with whipped cream, with a few of the red berries left whole over the top.

Raspberry Tapioca.—Soak a cup of pearl tapioca two hours; place in a double boiler with one pint of water and cook until clear. Stir into the tapioca one cupful of ripe raspberries and a cupful of white sugar. Pour into a pudding dish. Serve cold with cream and sugar.

Raspberry Charlotte.—Line a dish with stale sponge cake; then fill half full of raspberries, sprinkle with sugar, and then fill to top of dish or mold with a thick boiled custard. Let stand in a cool place or on ice for several hours. Serve with plain or whipped cream.

Raspberry Bavarian Cream.—Press a quart of ripe red raspberries through a sieve, mix with a cup of sugar and stand in a cool place a couple of hours. Mean-

Raspberry Shortcake.—Sift together one quart of flour, two teaspoonfuls of baking powder, a half teaspoonful of salt and one tablespoonful of sugar. Add one egg and enough sweet milk to make a soft dough, about a cupful will be right. Put together with as little handling as possible. Roll into three sheets about a half inch thick. Bake in a greased pan laying one sheet on top of another, buttering between. As soon as baked, separate, and put between the layers mashed and sweetened raspberries. Serve with sugar and cream.—Pansy Viola Viner.

Helpful Lemons

Many dainty desserts can be made of bananas by the addition of lemon juice, as the banana itself is more or less flat. One very delicious dessert is made of bananas mashed to a pulp, sweetened to taste with brown sugar, a little lemon juice and a cup of cream, whipped. This should be served cold or even slightly frozen or stiffened with gelatine.

In making orange marmalade the color is made much prettier by using one-third lemon to two-thirds orange. The taste is also much improved, because the lemon makes it more tart.

Lemon juice will take stains from under the nails when peroxide fails, and is very efficacious in removing tan. When the hands become wrinkled and spongy from being too long in water lemon juice will relieve the condition.

With these many uses for the lemon it certainly earns its exalted place in the kitchen.—New York "Press."

Patterns for Women Who Sew



1327—Ladies' Costume with Convertible Collar. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6½ yards of 44 inch material for a 36 inch size. The skirt measures about 3¼ yards at its lower edge. Price 10c.

1328-1331—Ladies' Costume. Waist 1328 cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 1321 cut in six sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It requires 5½ yards of 44 inch material for a medium size, for the skirt and waist. This calls for TWO separate patterns 10c FOR EACH pattern.

1332—Girls' Over Blouse Dress with Guimpe. Cut in four sizes: 4, 6, 8 and 10 years. It requires 2½ yards of 44 inch material with 1¼ yards for the guimpe of 27 inch material, for a 10 year size. Price 10c.

1334—Child's Rompers. Cut in four sizes: 2, 4, 6 and 8 years. It requires 3¼ yards of 36 inch material for a 4 year size. Price 10c.

1304—Ladies' Apron. Cut in three sizes: small, medium and large. It requires 5¼ yards of 36 inch material for a medium size. Price 10c.

1306—Ladies' House Dress. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6 yards of 36 inch material for a 36 inch size. Price 10c.

1315—Girls' Middy Dress with Skirt attached to a Separate Waist. Cut in four sizes: 6, 8, 10 and 12 years. It requires 3 yards of 44 inch material for a 10 year size. Price 10c.

1323—"Junior" Dress, with Under Waist. Cut in three sizes: 12, 14 and 16 years. A 16 year size will require 2½ yards of 27 inch material for the guimpe or under waist, and 4½ yards of 44 inch material for the dress. Price 10c.

Order patterns by number and give size in inches. Address Green's Fruit Grower Company, Rochester, N. Y.

Aunt Hanna's Replies

A Discouraged Bachelor

Dear Aunt Hanna: I am in trouble; I am a bachelor in the afternoon of life and have nearly given up hope of being anything else. Why is it that some people can get married without half trying while others seem as if nobody wants them, at least anybody they would like? I have never seen anyone that I wanted that wanted me. It is true I have met several that desired me that I could not have loved if they had been the only women in the country and then again their motives were purely selfish, I have had several of them propose to me. On the other hand I have proposed to several that I did love and tried to win the favor of others, but without success.

You don't know how utterly disheartening it all is, especially when you want to be something in the world. I have longed to have a nice home on the farm with poultry, fruits and flowers and all that goes to make up a happy agreeable country place. But a woman has got to be in it as a chief adornment.

I have found that most of the more intelligent women want to shun the farms. They want to live in town to be in so-called society life. They seem to have so many false ideals as to what make up life.

I have lived in both country and town and as a whole the country is the best. I have tried to live a moral life and belong to a leading church, use neither tobacco or liquor or gamble, have taught school, held places of trust and honor, and have felt sometimes because I had such habits they felt that I would be over exacting or demand too much of them and consequently the girls prefer some one of other habits.

So many of the more marriageable and intelligent women seem to be so squeamish and fastidious about the men they associate with. If his nose don't set just plumb, or his eyes or hair is not just the right color why they hope to find someone who does suit them.

My early life was one of great hardship, poverty and misfortune in family circles and was the cause of my not marrying the girl I loved then. I shall never forget that sorrowful occasion, and, like Shakespeare, it has been misfortune or disappointment ever since. I am fully aware that there are many noble women that the fates seem to be against them like myself, but it is not always easy to get acquainted because of conventionalism and timidity of people.

Many of us have gone to church or other places in strange communities dozens of times and few if any would shake hands or try to make us acquainted. In fact had we fallen in a crack they would not have troubled themselves or maybe even missed us.—J. A. X., Ohio.

Aunt Hannah's Reply: There are many thousand people like yourself, both men and women. I cannot offer you or those similarly situated much assistance. Those in your circumstances are, as a rule, constitutional bachelors.

I have endeavored through these columns and otherwise to assist those growing old who have never found a life partner, but never have I been successful, though I have brought together people who were widows or widowers. My opinion is that the man who finds himself growing old, who desires a life partner, and who is not able to find one, is deficient in some respect. It may be well for you to realize that you are deficient and that you need building up along certain lines.

The world is filled with good women who would gladly accept a favorable opportunity for establishing a home of their own through marriage. That you or any other man should not have met one of these good women and should not have convinced her that you are the man she has been waiting for is evidence that you are weak-kneed on the subject of matrimony.

How is it that widowers find no trouble in securing a wife? I know of men who are widowers, who are poor, who are growing old, and yet have been able to marry beautiful and accomplished young women.

Why is it that old bachelors have trouble in getting married and old widowers have no trouble? This is a question for you to answer yourself. Probably there is a vast difference between an old bachelor and an old widower. The widower probably has ten times as much tact as the old bachelor. Probably the widower appreciates the importance of having a home of his own and a wife, whereas the bachelor does not appreciate this fully. Very likely the bachelor approaches the subject of marriage in a half-hearted way, which is not calculated to inspire a deep-seated affection in the heart of any woman.

How did Billy Sunday, the great evangelist, win his wife? He won her by storm. She says she was endeavoring to get Billy interested in another girl. One day Billy burst into her house and to her astonishment within ten minutes after his entrance he told her that she was the only woman in the world for him and he asked her to marry him.

Now this taking of the citadel by force or by emphasis of enthusiasm may not work in all cases, but it certainly impresses the girl with the fact that her lover is in earnest and that he has a deep-seated affection for her, whereas the lackadaisical lover, the man who smiles and smiles, and talks and talks, and does nothing, wears out the patience and makes the girl doubtful as to whether he really is in love with her or whether he amounts to anything under the heavens.

I know of a fine looking young man of good habits, worthy in every respect, with business ability, who was attracted to a girl of wealth and distinguished family. He often called upon her and was cordially received. Almost every time he called he found present with this girl a bachelor who lived across the way, who had for many years been calling upon her, smiling and smiling, talking and talking, bringing her flowers, and saying nothing definite, and having no definite idea in his head rather than to pass pleasant hours. This bachelor by his meaningless calls and attentions succeeded in driving away the young man who might have won this girl. The bachelor never married and probably never intended to.

My impression is that God intended some men to be old bachelors. I have come to the conclusion that there is not much use in giving them advice. A man with a fair amount of intelligence and tact should be able to find a wife without my aid or the aid of any other person.

Since writing the above a girl friend of mine suggests that doubtless many men remain unmarried owing to the fact that they have set their ideals too high and thus find nobody quite good enough. She also suggests that possibly some, though probably not this writer, are not careful enough in dress or in personal appearance. No intelligent girl would like to be attached for life to a slouchy man, a man whose collars and cuffs are not changed frequently, or whose face is unshaven and hair uncut, whose shoes are unblackened, whose clothing is spotted and needs pressing. While clothing does not make the man, it has much to do with his success in many ways.

APPLE TRADE GOOD

Biggest May Day Trade Ever in New York This Week.

New York, May 7.—The Biggest May morning in the apple market in years was Monday morning, when over 60 cars of barrel and box stock were cleaned up. Jobbers in turn had a good retail trade, which sent them back on the subsequent days of the week for more fruit at the same prices as prevailed on Monday. To quote one of the largest receivers: "Never has the market taken such quantities so easily and at such prices at it did on Monday." Something like 60 per cent of the offerings were the poorest of quality or out of condition and sold solely on their merits at \$2 to 3, but firm, bright fruit picked up quickly at \$1 per barrel higher average. Barrel Baldwins sold at \$2.25 to \$4.25, Ben Davis \$2.50 to \$3.25, Rocks Russets \$2.75 to \$3.25, Golden Russets \$2.25 to \$2.75, Greenings \$2 to \$3, Greenings were poor in quality, most of them being scalded and overripe and therefore not in demand.

Box apples sold freely, but did not advance in price as did the barrel stock. Winesaps usually brought \$1.50 to \$1.75, Missouri Pippins \$1.50 to \$1.60. Ganos \$1.30 to \$1.50, Ben Davis \$1.10 to \$1.30, Pippins \$1 to \$1.60.

Remedy for Rose Bugs and Cut Worms.

Green's Fruit Grower: I notice you state in the May issue that you cannot poison the rose bug. If you will add two quarts of molasses to 50 gallons of spray solution, you will get the rose bugs to eat it, and then good-by rose bugs. Our formula is as follows:

- 5 lbs water slacked fresh lime
- 5 lbs blue stone
- 3 lbs arsenate of lead
- 2 qts. molasses
- 50 gallons water

This year the cut worms are after the peaches as well as the grapes. During the night they crawl up the trees and eat the heart of the blossom buds. To stop them use tanglefoot around just below the limbs, or cotton batting tied around with a little roll over the string. Leave no uneven spaces where they can crawl through. Have counted as high as 70 around under the cotton.—Dr. Ira H. Rea, Michigan.

Good Apple Crop Aspects

Report from all apple producing sections of the country, except the Northwest, says The Fruit Trade Journal and Produce Record, indicate that there is a prolific bloom on every variety, and that the outlook points to a large yield this year. Advices from Western New York state that many localities will have fully as many Baldwins as last year, and all signs point to a much heavier yield of Greenings. Advices from the Northwest are somewhat conflicting. The crop there, according to the Northwestern Fruit Exchange, will be shorter than that of 1914, which comprised about 14,000 cars. The crop in the Yakima Valley is estimated at only 60 per cent of that of 1914. Other experts say that Washington and Oregon will have fully as many apples as last year. In Colorado and California, where orchards have been well cared for, a good crop is expected.

Prince Albert tobacco is the real joy smoke!



Here is another just-elected member of the Prince Albert "old-time jimmy-pipers club." This is John O'Reilly, of East Providence, R. I., who has just passed the century mark. Mr. O'Reilly is one of those grand old men who has come to this ripe age with the joys of his friendly jimmy pipe fresh in his mind each morning. He has always been a liberal smoker.

Just as soon as you smoke some Prince Albert tobacco in a pipe or cigarette, just that soon you'll understand how different it is in flavor, in aroma and in genuine goodness. No other tobacco can be like Prince Albert. The patented process fixes that — and removes the bite and parch!

You come on and get pipe or cigarette makin's happy. Know yourself what it's like to smoke all the tobacco you want, and smoke as long as you want without even tingling your tongue!

PRINCE ALBERT

the national joy smoke

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just makes it possible for every man to renew his love for his friendly old pipe, or to get a new idea how good a hand-rolled cigarette can be. You've no idea of the satisfaction, content and restfulness that's yours if you'll get chummy with P. A. Lose no time getting acquainted with this real and true man-tobacco.

Buy Prince Albert everywhere tobacco is sold. Topsy red bags (handy for cigarette smokers), 5c; tidy red tins, 10c; handsome pound and half-pound tins, 10c; and that classy pound crystal-glass humidor with the sponge-moistener top that keeps P. A. fit as a fiddle!

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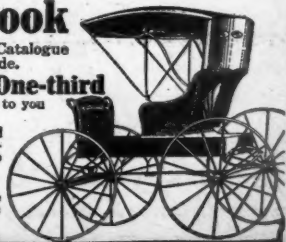
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LEE'S LICE KILLER AND GERMOZONE

are essentials to success with poultry. The former is simply sprayed or painted on roosts and kills all insects there as well as lice on the bodies of the chickens roosting over it, scaly leg mites, etc. No handling, dusting, dipping or greasing. Germozone is given in the drinking water. It purifies the water and vessels. It prevents contagion from one to the others. It counteracts musty or spoiled food. It prevents and relieves bowel trouble. It is a ready remedy for roup, colds, swelled head, canker or skin disease. Conveniently obtainable at most every city or town. Get our free poultry book.

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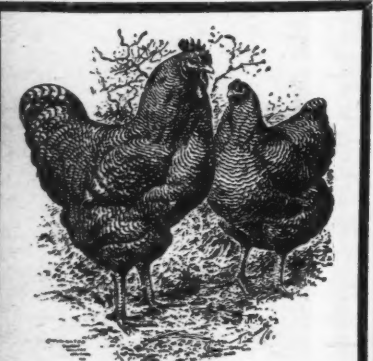
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This breed is as solid as its name and is often called the "Farmer's Friend," the "All Round Fowl," the "Old Reliable." It is the bird for business, and deemed by many the best fowl for farm and home raising. It is not only a good layer, but is quick to develop for the early market. As a farsighted farmer once said to us, "When you kill one you've got something."

Cockerels: \$3, \$5 and \$7
Pullets: \$2, \$2.50 and \$3

We ship no cull birds. The lowest priced birds offered are standard bred, practically as good for breeding purposes as the higher priced birds. The higher priced birds offered are the pick from the flock containing the largest percentage of standard points and therefore commanding a higher price since it makes them eligible for show purposes.

Low Prices on Quality Eggs for Hatching

\$2.00 per 15, \$8.00 per 100

While we do not guarantee the fertility of our eggs we are willing to replace all settings from which the purchasers receive less than six chicks, at half the price paid.

All of these fine birds are included in our Barred Plymouth Rock breeding pens from which you can purchase eggs at \$2.00 per setting of 15. Send your order at once.

Green's Nursery Co.

Poultry Dept. Rochester, N. Y.

Poultry Dept.

How Many Eggs Each Year

We have published the yearly records of notable hens, some of which have laid 250 eggs, as nearly as I can remember. This seems like a large number. Certainly a hen that will lay 250 eggs should be kept employed for that purpose and not sold to the butcher. But there are other creatures which excel the hen in the laying of eggs. Among these are some of the insects, which are marvelously productive, and many of the fishes. Since the fish when first hatched has no protector, it is devoured in large numbers by other fish, therefore comparatively few live to full maturity. Nature has provided for this waste of fish life by the large number of eggs that fish will lay. For instance, one codfish is said to yield 6,000,000 eggs in one year. This fish is so prolific it is claimed that if there were no destroying of the little codfish soon after hatching, the ocean would in a short time become a solid mass of codfish, so that navigation would be no longer possible.—C. A. Green.



This man is having trouble, as is illustrated by Craig Fox in the Democrat & Chronicle. The hens are digging up the newly planted seeds of his garden. The fact that poultry are fascinated with the kitchen garden is much to their credit, indicating that the hens have intelligence enough to know when they have found a good thing. Not only do hens sometimes molest the garden beds in search of peas and corn. When the strawberries are ripe they indicate their good sense in helping to harvest a portion of this delicious fruit. When tomatoes ripen the poultry need no announcement of that fact, but help themselves generously. At Green's Fruit Farm we do not condemn the fowls for seeking desirable food wherever they may find it. We simply confine them in the poultry yard during the season when we desire exemption from their visits to the garden patch and to the rows of strawberries intended for our family use.

For the Poultry Department

Not only have dropping-boards, but cover them with a thin layer of concrete. This is not an original idea with me, but I adopted it about two years since, and find it very satisfactory. I use about one part of cement to three or four of sand, or fine gravelly sand. Truth is, I used sand from the roadside, washed down by the rains, and it is satisfactory. I spread not over one inch of the mixture over the boards, covered it with old bags one night, then let the hens run on it, for it had set. Not only does it make cleaning more easily done, but, allows no hiding places for mites; moreover, it is more sanitary. Try it.—Old Bill Orpington.

Spade Up Chicken Feeding Places

On most farms feed for the flock is scattered about on the ground, and the chickens are continually fed within a small space, says N. E. Chapman, Extension

Poultry Specialist, University Farm, St. Paul. The surface of the ground soon becomes foul with the droppings of the flock. True, the sunshine acts as a germicide, and if the space is at all sloping the washing of the rain helps some, but generally the spot is level and often muddy. The ground quickly becomes contaminated with the continual tramping of the flock, and if there be one sick fowl the whole flock may soon become infected. This is especially true with small chicks and young turkeys. The first advice given in cases of general loss is "change your feed place." It is often impossible to find another location so convenient and accessible.

The spading up of the feeding place once or twice per week will bring good results. It will tend to purify the ground. It will induce exercise on the part of the flock, which is always desirable. Especially is this true when the flock is confined in yards, and green feed, so necessary, is difficult to obtain. If grain is scattered as one spades up the ground much will be buried so deep that hens will not scratch it out and it will be thrown up at the next spading with green succulent blades that are greatly relished by the flock.

Be sure to try this method of often spading up the feeding places and watch results in avoiding infectious diseases and improving the general health of the flock by inducing exercise and furnishing palatable succulent feed.

Poultry Practice

Allow the hens free range. Wire in the garden, not the hens. Stronger fertility is secured from birds on range.

Remove the male birds from the flock as soon as the hatching season is over, so as to produce infertile eggs. Infertile eggs are produced by hens having no male birds with them. Infertile eggs keep much better than those that are fertile. The male bird has no influence on the number of eggs laid.

The hen's greatest profit-producing period is the first and second years.

Do not allow sitting hens to remain in the henhouse. By so doing many eggs are started to incubate, which renders them unfit for use at home or to market.

If possible place the brood coops near the cornfield, which furnishes both shade and fresh ground.

The free use of kerosene or crude petroleum on the roosts and dropping boards in the cracks, and around the nests will exterminate mites. Whitewash is good.

Spray the brood coops once a week with some of these solutions and move to fresh ground.

Be sure to feed the table scraps to the fowls. Milk is one of the best feeds for egg production.

Flying Over the Fence

A fowl never flies over a fence without touching the top, says Mirror and Farmer. When a hen makes an attempt to go over, her first effort will be to alight on the top, from which she descends to the ground. If the top of the fence is so constructed that she cannot alight on it, she will drop back into the yard. To prevent flying over, drive nails into the top piece, from the under side, before placing it in position, allowing the sharp points of the nails to project upwards. Or if preferred, use two strands of sharp-pointed barb wire, having the barbs close together, the wire simply tacked to the top strip.

This is a good time to put a square of tar paper in the bottom of each nest box for the benefit of lice.

Roosting too early or roosting on perches that are too narrow often causes crooked breast bones.

Hens over two years old are seldom good layers, and unless good as breeders should be disposed of.

While a yellow-skinned fowl is no better than a white-skinned one for the table, the former usually sells the quickest and best.

Fowls in the Orchard

The orchard affords an ideal place for poultry, and these are some of the reasons, says Fruit Grower's Journal: First is the shade. As a rule you cannot grow crops in an orchard, that is, after the tree limbs begin to meet, but this shade, detrimental to crops, is fine for poultry. Next is the amount of fruit enemies the poultry destroy. They scratch at the roots of trees for larvae, they pick them out of tree trunks, they tear fallen apples apart to get them. It is allowing such apples to lie and rot on the ground, thus nourishing the worm, that makes next year's crop of apple blighters more numerous, for the worms emerge from the decaying apples to hide away for next year.

The scratching about the trees loosens the soil, preventing sod binding, the droppings are of more benefit to the trees than we give them credit for.

Those Egg Eaters

Editor of Green's Fruit Grower: Referring to that portion of Mr. Underwood's article "Troublesome Habits of Hens" in January issue of the Fruit Grower, EGG EATING BIRDS, I wish to give a tried out remedy that is full of logic, and does the work.

A year ago I had just such an experience as set forth in Mr. Underwood's article. My flock acquired the habit of egg eating good and proper, so much so that they got them all and hunted for more, even the roosters would sit near the laying hen and wait for his egg. I tried everything suggested to break them of the habit, to no avail. I then concluded more stringent measures must be pursued or destroy the flock.

This was my last resource: With your pen knife or some other suitable instrument drill two small holes one in each end of a good egg, blow out about one-third of the contents, dry away the moisture one end at a time, fill the vacant space with strong spirits of ammonia, then close the openings with ordinary chewing gum.—most any little girl will give you an old cud,—dry away the moisture and apply with the use of a little heat from a lamp, match or the like. Be sure the moisture is all gone or you will have trouble in the gum not adhering. Now shake the egg to secure a thorough mixture of the ammonia and remaining egg.

It is now your turn to begin to giggle as you are going to see some fun. Lay the egg in some conspicuous place in the yard or pen, stand back and watch developments. If Mr. Cock gets the first crack, he no doubt will turn a somersault or two for your benefit, he will also go through some more funny stunts. They are like pigs and hot slop, they will all take a taste before they discover something is wrong. Repeat the operation several times over a period of a day or two, when you will find an effective cure has been made, and eggs may lay anywhere without molestation.

For feather pulling I use flour sulphur fed in their mash two or three times a week during the winter, or until they get out on a run, with excellent results.

I use about 1-4 pound for fifty hens in one feeding. Feathers contain sulphur, it is a tonic, and is instinctive nature for them to get it wherever they can, consequently being most accessible they go to pulling feathers, and after a time this becomes a habit through the taste of blood and other matter that comes with the feather. Remove the cause and gain the effect.—W. O. DeWitt, Pa.

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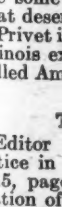
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Nebraska Fruit Methods

Stella, Nebr., Apr. 30, 1915.

Editor of Green's Fruit Grower:—Apple orchards are in full bloom in southeastern Nebraska, two weeks earlier than usual. The bloom is so abundant that 90 per cent of a crop is estimated, or almost a full crop. The orchards that bore light last year, are now in the heaviest bloom. The intense drought the last two seasons has caused some loss in the orchards, but not to an alarming extent. The heavy snows during the long winter and the wet spring have put the ground and the trees in fine condition. In fact, this spring has been almost ideal fruit weather.

However, the blooming has been so rapid and early that many orchards missed their first spraying, known as the dormant. In commercial or cultivated orchards four sprays are given. The first, or the dormant spray is for fungus, or apple scab, and is given before the blossoms come out. The second spray is given just after the blossoms drop, and is for the codling moth. The third spray is two weeks later than the second, is usually given about the last of May, and is for the second brood of the codling moth. The fourth, or last, spray is about three weeks after the third, and is to kill the third brood of the codling moth.

(Continued Next Month)

growth. Use three pins to the piece. Bore the holes about 3 inches into the tree. and make the pin drive in pretty tight all the way, or put a secret wedge in end cross-ways (or at right angles) with the grain of the tree. This is done by splitting the end of the pin and inserting the point of a short wedge before driving. When the end of the wedge reaches the end of the hole it will be forced into the pin and make it very tight. Put a $\frac{1}{4}$ or $\frac{1}{2}$ inch bolt through the oak piece and pins to hold them together and to prevent the piece from splitting. Fasten the fence to oak piece. If the trees are kept trimmed high they will not shade the crops enough to damage them, will not draw so much of the plant food from growing crops, and the trunk will expand more rapidly and uniformly, and will produce better timber, which is the most durable grown for fence posts, and can hardly be excelled for axles for farm wagons when cut at the right stage of growth. If kept free from nails or staples in this way, can be sawn without fear of damage to the saw.

It is very rapid of growth, producing a tree of valuable size in a remarkably short time, and is, I think, of more value to the farmer than any other rapid growing variety, and would make beautiful avenues of the highways.—Wm. H. McCormick, Va.

Women—I believe that few men either live piously or die righteously without a wife in whose soulful spiritual nature is found the essence of purity, loveliness and virtue. On the one side we have the unclouded and unbounded cheerful welcome and on the other the soulless and cheerlessness of unwelcome, loneliness and solitude. Man only begins to appreciate the value of woman as he grows in years and experience.

There is no friend like the mother; even when the world forsakes and despises, and kindred paint your faults so black that hardly a redeeming feature can be discovered, it is she who stays by and comforts you. Surely her name is more precious than gold, yes than much fine gold. How many are to-day alive and with us who would have long since been on the other shore but for the sweet influence of women. When a poor girl is betrayed, she is driven from society, not so with her brutal betrayer who yet remains in honorable society. There is deep wrong in this and fearful consequences, to our shame be it said.—Jacob Faith.

The Lord shall preserve thy going out and thy coming in from this time forth, and even for evermore.—Ps. 121:3.

If any man hear my voice, and open the door, I will come in to him.—Rev. 3:20. These things write I unto you, that ye sin not.—1 John 2:1.

Tobacco Spray for Leaf-Hopper

The insect known as the leaf-hopper, which has seriously menaced the vineyards of Ohio and Michigan, may be controlled by the use of a tobacco spray, according to the scientists of the Department of Agriculture. The time for the application of this spray is during the last few days in June or very early in July.

Successful control of the insect depends on thoroughly wetting all parts of the under side of the infested leaves with the spray liquid. The following two formulas have been used with excellent results:

Tobacco extract containing 2.70 per cent. nicotine sulphate, diluted at the ratio of 1 part to 150 parts of water.

The killing quality of the tobacco extract is apparently just as effective when added at the same dilution to the Bordeaux mixture and arsenate of lead spray liquids, which are used to control fungous diseases and chewing insect enemies of the grapevine, as when used with clear water. No injury results from combining these spray mixtures, namely, tobacco extract, Bordeaux mixture and arsenate of lead. However, the tobacco extract should not be mixed with spray mixtures containing arsenicals in the form of Paris green or arsenate of lime, for serious injury to the foliage is likely to occur as the result of the combination.

Campaign Manager—"I hear poor Jobb has lost his memory. Can't remember a thing from one day to another." Secretary—"Wouldn't he be a good man to take charge of the campaign contributions?"—Baltimore "American."



The above is a photograph of an African gander resting on the knee of its owner who is very proud of this beautiful bird. What a pity that the intelligence of all kinds of birds and of all the lower animals, so-called, is not better appreciated. Notice the intelligence displayed in the eyes and face of this bird. I have a pet parrot which is as appreciative of kindness and as affectionate and almost as intelligent as some human beings. The wild birds, the robins, bobolinks and quail are just as intelligent as my parrot.

Prof. Van Deman:—I want your opinion on pecan trees and Irish privet. Will California privet grow hardy in Illinois, and will paper shell pecans do any good here?—C. L. Moore, Ill.

Reply:—The southern type of pecans will not succeed in Illinois because the climate is too severe but there are varieties that are hardy there. Some very fine ones are now obtainable from the nurseries at Vincennes, Indiana, where they are being propagated by grafting and budding. They are named and described and nearly all came to be known by searching out the best trees that are growing and bearing in southern Indiana. There are some good ones in southern Illinois that deserve to be brought to notice.

Privet is apt to be hurt by the winters of Illinois except a hardy kind from Russia called Amoor.

Trees as Fence Posts

Editor of Green's Fruit Grower:—I notice in Green's Fruit Grower of May, 1915, page 20, an explanation and illustration of the right way to use a tree as a fence post. This is good, but I have had in my mind for some time an idea of one that I think is better. Plant yellow locust trees twenty feet apart on all permanent fence lines, keeping same trimmed high and when 4 1/2 or 5 inches in diameter pin a 2 1/2 x 3 inch oak piece to the side of each tree, long enough for the height of the fence, using inch locust pins, allowing the oak piece to stand from 1 1/2 to 2 inches clear of the tree, allowing room for expansion in

DENIES ANY DESERTED FARMS
Professor E. Wallace Finds New England States Progressive
Cleveland Plain Dealer

Stories of abandoned farms in New England states are declared pure fiction by Professor Edward Wallace of the Indiana College of Agriculture. He recently completed a tour of investigation and found some interesting facts.

Some farm residences were found vacant and some farms so worn out that cultivation was hardly profitable, but he found such land selling from \$10 per acre up to \$175, depending on how well land was situated. Men who understand soil reconstruction are buying the land and taking their chances on increasing its productivity. When crops fail, these new farmers do not blame providence or the weather, but look for chemical conditions in the soil. If the soil is lacking in elements necessary to plant life, they correct conditions. Lime, phosphates, and various fertilizer compounds are employed.

The same fight is being waged in Ohio. The state board of administration has used many carloads of pulverized lime this year on state farms, putting the soil in condition for increased production. It is using pulverized limestone from the penitentiary rock quarries near Columbus. Analysis shows it ideal for soil betterment. Worn out land has been fully restored in Ohio in hundreds of instances. Joint action of brain and brawn brings it about without delay. If the soil of any state is given proper care it will continue to produce. Worn-out soil is proof of nothing so plainly as poor methods and lack of care.

Reply to G. F. S. of Dover, Delaware Having lived for several years on the Chesapeake peninsula, about 100 miles south of Dover, and having traveled in the state of Delaware, I can safely say that whole region is well adapted to fruits of all kinds. I was at one time president of the Peninsula Horticultural Society.

In regard to quinces, the Orange variety is the one mostly grown there and one of the very best. Van Deman is somewhat later in ripening. No variety is entirely free from blight, and I could never see any material difference between them in this respect. Every appearance of it should be cut and burned as soon as noticed.

Japanese walnuts are self-fertile, so is the Eleagnus longipes. The pawpaw is not always self-fertile, because solitary bushes often do not bear, but when several grow near each other they usually bear well. There are a very few of the Japanese and Chinese varieties of the persimmon that have been fruited, but usually they suffer from cold winters. They are not satisfactory in your region.

The currant and gooseberry are both native of the far north, and the climate of Delaware is rather warm for them. While clean cultivation is all right for them farther north, they do far better in southern regions if well mulched all the year around. North of a high board fence or wall they do better. Sometimes under shade of trees seems best.

Always leave home with loving words, for they may be your last.



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Little Lonesome House

"Let's go house hunting," suggested Homer Rutledge.

"What for?" questioned Amy Richards, in pretty amazement.

Amy's winsome face flushed and she stamped her foot with annoyance. Then she smiled charmingly. "You're simply impossible, Homer," she cried. "How many times must I tell you that I'm not going to marry you?"

"Huh?"

"Now, don't be silly. I'm not going to marry you and so there's no use of our going house hunting."

"Well," sighed Homer, "then let's go house hunting to find the kind of house we'd like to go housekeeping in if we were going to get married."

Amy burst into laughter again at this. "Who under the sun ever heard of such a wild proposition?" she asked. "What's the good of going house hunting when we aren't going to get married and neither one of us wants a house?"



"I want a house all right enough," asserted Homer, suddenly serious. "I want a house that will be a real home and I want it mighty bad. I'm sick and tired of living in a boarding house and I don't believe you're any too satisfied with your little hall bedroom, either. I'd like to have you help me pick out the kind of a house we'd both like—that would be a sort of satisfaction anyway. Come on, won't you? I know the very district and we can go there in a few minutes in my automobile. It's a fine day for a ride, too."

Amy looked at him for a moment without speaking. All the laughter was gone from her eyes. She was thinking deeply of what he had said about being tired of boarding house life. She, too, was tired—and yet was Homer the man she wanted to marry? Was he the kind of a man to make a home, or the kind that would care nothing for his home after the first few months—that kind that would leave her alone in worse loneliness than she ever experienced at the boarding house, while he had a good time at his club?

"I'll go," she assented finally.

"Good," cried Homer.

It was, as Homer had said, a short ride to the section of the city he had in mind.

"I saw the advertisements of this Oak Knoll addition," he explained, "and they were worded so invitingly that I simply had to come out and look at the section. I believe I've found the very house that we'll want. It will be a real home for us."

"But," interjected Amy, weakly.

"Now don't start that," cried Homer. "We're pretending that we're engaged to be married and we are now engaged in the delightful occupation of looking for a home."

Soon they drew up before a little, cozy, comfortable house that stood some distance from the road among a bower of trees and hedges that half hid it from sight. Homer, in high spirits, helped Amy to alight.

A young couple passing on the sidewalk smiled appreciatively at Homer's evident pleasure.

"Looking for a home?" questioned the man, pleasantly.

"Yes," answered Homer.

"Engaged or married?" went on the man.

"Engaged," Homer replied, while Amy felt her cheeks kindle.

Again the couple smiled. "We're just married," said the man. "We live over there behind that hill. Come over and see us when you get settled."

"We will," declared Homer, fervently.

The couple passed on, while Homer and Amy walked up the hedge-bordered path toward the house. The spot was lovely,

and Amy felt herself deeply stirred as she looked about. It was all so homelike and comfortable that she was strongly attracted toward it. It would be a fine place in which to begin married life with Homer—if only she could be sure that Homer was the right man.

As they came nearer the house her delight in it increased. It was a cozy, inviting little place. Though new, it already had the satisfied appearance of an old settler. There was none of the rawness generally so evident about a new house. Already she felt that she was in love with it.

"Why here's a funny thing," said Homer, pointing to a little sign on the door. Amy looked. The sign read:

LITTLE LONESOME HOUSE

Beneath the sign was an arrow pointing to a little box attached to the door knob. Homer opened the box and drew out a sheet of paper. Amy looked over his shoulder as he read it. This was what was written on the paper:

"This is Little Lonesome House. It is lonesome for a young couple to make their home in it, to brighten it up and to bring the joy of life to its rooms. The owner of Little Lonesome House is an eccentric bachelor who will give the house to the first engaged couple who opens its front door and steps over its threshold. But if they are not engaged they may not have the house. For further particulars apply to John Watkins, Third Street."

Amy thrilled as she read this message, and she thrilled still more as she felt Homer's eyes on her.

"Shall we enter and take possession?" he questioned.

Amy hesitated. Love for Homer was kindling in her heart. She felt sure that he must be the right man and yet—and yet. "Let's go in and look around," she suggested. "But not as an engaged couple."

Homer took the key to the front door from the mat in front of the door and opened the door. They stepped in. The house was already furnished, and so charmingly furnished that at the first glance Amy fell in love with the home. It was ideal, she felt. It was the most entrancing spot in the world in which to begin married life.

"See here," said Homer to her softly, "if you stand just here in the hallway you can see a long distance down the road, so you can watch for me here at night. And I'll know you're watching, and if I'm tired it will give me new strength and hasten my steps."

Amy sighed. She was on the point of accepting, but she was not yet quite sure that Homer was really the right man—that he was really a home loving man.

All through the house Homer pointed out the things that were designed particularly to give a woman pleasure. When they had completed their inspection Amy sighed.

"It's simply adorable," she cried.

"We'll come again tomorrow."

The next day when they again approached the house Amy saw a young couple walk up the path toward the door. Fear struck her to the heart. What if this couple should find that peculiar message from that eccentric bachelor and take the house from them? In that instant her mind was made up. She turned quickly to Homer.

"Hurry, hurry," she cried. "There's another couple going up there and they may take the house from us."

Homer stopped the machine. He turned to her with the light of hope shining in his eyes.

"Then you'll go into Little Lonesome House with me as—as my fiancée?" he asked.

"Oh, yes, yes, yes," answered Amy. "I know you're the right man now. Yesterday when you showed yourself so familiar with the house I became suspicious. Last night when we got home I called up the agent and I found that you not only own Little Lonesome House, but that you designed it all yourself and fitted it all up so lovely and cozy and comfortable. No man who is not really a home lover could have done that, so I know you're the right man."

Homer's face became suffused with the light of a great joy. Amy turned her face away, at the light in his eyes.

"I'm mighty, mighty glad of that," said Homer.

Suddenly Amy found voice again. "But hurry, hurry," she cried. "That other couple may find that letter and then you'll have to give the house to them."

Homer simply smiled.

"That note was for your eyes, dear," he replied. "I wrote it to arouse your interest in the house—to hitch up your home-loving instinct with the thought of marrying me. So, naturally, I wasn't going to take any chances with any one else finding it, so I took it out of the box last night before we left. Here it is."

And he pulled the note out of his pocket.

—St. Louis Globe-Democrat.

Tent-Caterpillars

Green's Fruit Grower: I am much worried about the tent-caterpillars on my nearby trees. I have set 300 dwarf pears and a lot of peaches this season. Some have just started to show leaves, others have not started yet. Should I spray them now or at all this season? Please let me know when to spray and what to use on these young trees.

I also find these caterpillars in large numbers on all kinds of trees in the neighborhood, and on some old apple and peach trees of mine. These I have burnt off with a torch, but after one week I find more caterpillars than before. What shall I use to control them? Please let me know as soon as possible how to treat the young trees to keep the caterpillars away; how to control the caterpillars on the old trees. Elwood Carpenter, N. Y.

Reply: Tent caterpillars are not difficult to eradicate. It is not difficult to protect vines, plants and trees from any insect which feeds upon the foliage of the trees, for if poisoned sprays such as arsenate of lead or paris green are applied without delay all of these insects can be destroyed. You should go through your orchards in the winter, picking off all the branches on which you see the eggs of the tent caterpillar, which encircle the small twigs and are whitish colored glued solidly together. Then when warm weather comes, or as soon as the caterpillars hatch and begin to feed on the foliage, the trees should be sprayed. Then later all caterpillar nests should be discovered and burned early in the morning or late at night while the caterpillars are congregated in the nests.

There are many kinds of worms known as caterpillars, therefore possibly yours are not caterpillars. If you are in doubt about this, send specimens to the Geneva, N. Y., experiment station.—C. A. Green.

"Miss, is there any one waiting on you?" asked the clerk with the ribbon shears.

And the maiden blushed as maids will do and said: "It's a secret, but I'll tell you—George has been waiting on me two years."—Pittsburg Post.

Sum Sayings

Unthinkable things ar oftun dun bi pepul who du not stop tu think.

A pretty face may please, but er sweet tempur iz mor tu be dezied.

He who forgets the bad and remembers unly the good knoze what tru hapines iz. Selfshnes iz er weed that grows fast, if ritely fed, an allus proves er kurse tu its owner.

The greatest an mos valuabul thing er man kan posses, iz God's love in hiz heart.

The medisun yu don't take won't hurt yu, but what you do may. This is also tru ov likkers.

Whatever hapuns don't get hot under the kollar, fur its apt tu make er sore spot. It is er good deul ezier tu keep kool while under fire, with er kleeer konshuns than with er guilty one.

The suksesful farmer study his farm till he's lernd its needs an kapability.

Thar ar lots ov litul things that farmers hev that thay don't need, such az flize an squash bugs, skeeters an tatur bugs.

The wize man don't stop tu tawk with the sliik agent who hez sum get-fich-quick skeem fur farmers.

Flowers in the window,
Flowers on the stand,
Cheer the weary toilers
And the household band.

Litul deeds ov kindness,
Litul words of love,
Make the farmer's home-life
Seem like heaven above.

By Unkel Dudley



Growing wood doesn't rot Cut wood need not

Sap is the life of growing wood. The moment wood is cut the natural sap dries out of it and leaves the pores open. After that the less moisture in the wood the better. Paint made from

Dutch Boy White Lead

and Dutch Boy linseed oil protects weather boards by excluding moisture.

Try an experiment. Add to a paste of White Lead and Water some Linseed Oil. Watch the oil literally push the water out. Dutch Boy made-to-order paint resists water just as effectively and is so fine that it anchors into the empty wood pores and sticks there like a driven nail. It wears slowly, beautifies for years, needs no burning off to repaint. Dutch Boy paint may be tinted any color. Your dealer can mix it—or you can.

You can now get red lead in paste form, same as white lead. Doesn't harden in the can. Fine for painting resinous wood; best by all odds for implements and metal work. Ask your dealer.

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Health Department

"Your health is worth more than it can possibly cost you."
—Samuel Johnson.

To Treat a Bunion

Bunions are species of enlarged corns, though they appear over the bony prominence of the foot—generally on the large toe joint. A shoe that is too short is usually responsible for the misery a bunion causes.

If greatly inflamed or very tender, apply hot poultices, no matter what kind, but keep the joint hot for half an hour or more. This may be done at night. In the morning paint it with iodine. When the inflammation is reduced, or if none exists, treat the bunion as you would a corn, and between the large toe and the next wear a piece of cotton batting all the time until a cure has been effected. The cotton must be gradually increased in size, as this helps to straighten the large toe.

current criticism that woman is flying from one thing to another and undertaking too much and wearing out her nerves is not altogether sound. Some of them do, doubtless, but they are the exceptions. Woman's great trouble in the past has been routine. Doctors found that the reason so many cases of mental disease came from the farms was that farm women did not have enough interests. Their loneliness was disastrous. Now, that the farm women have the telephone and the automobile and the social societies and other means of diversion and employment conditions are improving.

So, the lessening of woman's work by system and the use of all labor-saving devices possible really means that besides the enjoyment of better hours she has time for things that will broaden and stimulate her mind, bring her in association with other women and give her the opportunity to be a part of the larger life and progress of the age.

In Case of Fire

The first thing to do when one's clothing catches fire is to smother the flames with a blanket, a coat or anything made of wool. If a person is severely burned, the clothing should be removed by cutting, great care being used not to tear off the skin. Dress the burns immediately with either caron oil, vaseline or olive oil mixed with white of an egg. Old linen cloths saturated with any one of the above



The Honey Cure.—An Iowa doctor has discovered that honey taken in two tablespoonful doses, five times a day for ten or twenty days will cure rheumatism. One thing must be observed: The honey must be taken between meals, the last dose at bedtime and no fluids must be ingested for at least one hour after taking a dose. Either strained or comb honey will do. Honey is often recommended and prescribed by physicians for colds, coughs, etc. It is also beneficial to patients afflicted with kidney trouble. A Nebraska doctor says that honey is a sure preventative of the dreaded Bright's disease of the kidneys. Honey has a good effect on dyspepsia, if eaten on graham gems. In cases of erysipelas, immediate relief of pain is secured by spreading honey on a cloth and applying it to the affected part. —Field & Farm.

MAKING YOUTH LAST LONGER Women of To-day Carry Their Years Better Says Writer in Woman's World.

Our women are carrying their years better. Not only is the length of lives increasing, but they are making their youth last longer, says a writer in the Woman's World, for March. They are raising stronger children. There is an uplift to the whole race. Many explanations are offered, but the big cause underlying the whole effect is the improvement of the home and the lightening of its drudgery. There is now more time for improving the members of the family; more time for culture and travel; more time for civic and other public matters.

Staying younger is largely a matter of keeping interested in things, and to keep interested, there must be variety. So the

remedies must be applied directly to the burned surface. Next to the linen lay on smoothly sheet wadding or cotton batting and bandage to keep the dressings in place. If the burns are extensive, it is important to keep the patient warm and give stimulants freely.

Soils Vary

Probably no agricultural fact is more generally known by farmers and land-owners than that soils differ in productive power. Even though plowed alike and at the same time, prepared the same way, planted the same day with the same kind of seed, and cultivated alike, watered by the same rains and warmed by the same sun, nevertheless the best acre may produce twice as large a crop as the poorest acre on the same farm, if not, indeed, in the same field; and the fact should be repeated and emphasized that the productive power of the land depends primarily upon the stock of plant food contained in the soil and upon the rate at which it is liberated, just as the success of the merchant depends primarily upon his stock of goods and the rapidity of sales. In both cases the stock of any commodity must be increased or renewed whenever the supply of such commodity becomes so depleted as to limit the success of the business, whether on the farm or in the store.

As the organic matter decays, certain decomposition products are formed, including much carbonic acid, some nitric acid, and various organic acids, and these have power to act upon the soil and dissolve the essential mineral plant foods, thus furnishing soluble phosphates, nitrates, and other salts of potassium, magnesium, calcium, etc., for the use of the growing crop.

My Fruit Success

Mr. Chas. A. Green:—I will let you know in a small way how much I appreciate and admire your good paper. Sixteen years ago, while I lived with my folks, we received a pamphlet written by Chas. A. Green, "How I Made the Old Farm Pay." I soon became interested in fruit culture. Some of our neighbors had commenced growing bush fruits, so we decided to try. Following the plan laid out in your pamphlet, we made the purchase of a peach orchard, which bore abundantly. We set out a plot of Gregg and Palmer black raspberries, one of Jessie and Bubach strawberries, some currants and gooseberries. All did well and bore heavily. We found the Palmer raspberry a little too small, so we purchased the Kansas in its place. In a few years figures showed we were making more clear gain in dollars and cents from our plots of fruit than the rest of the farm was making for us.

Time has passed and your paper is still finding its way to my home and family. The help I am receiving from the Fruit Grower is worth many dollars to me each year. Berry culture is my leading industry. I am fruiting this year sixteen varieties of strawberries, and have originated several very promising varieties. An especially good one, of which I am sending you the photo I have named the Billy Sunday. It fruited for me last year at the rate of 9000 quarts per acre.

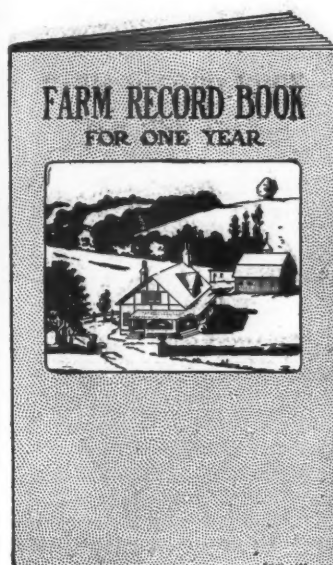
As we usually have some hot dry weather when the raspberries are fruiting, I raise the Eureka for early and the Cumberland and Gregg for late. Owing to the dry weather last year some fruit growers in my neighborhood lost fifty per cent of their blackberry crop that never matured on the bushes. Because of frequent cultivation mine held moisture, and the last

picking was about as large as the first. I grow the Eldorado.

We have a splendid market for fruit here. I ship my fruit to Columbus, some to smaller towns, at a big profit. I always aim to grow better and nicer fruit than my neighbors, and have built up a fancy family trade that makes berry raising both profitable and pleasing. I also find sale for a large number of plants which helps greatly in paying hired help. When I go back a few years to the experience I got at home I feel as if I owe my success, pleasure and profit in fruit growing to Charles A. Green.—D. P. Yost, Ohio.

Send the Fruit Products West

Editor Green's Fruit Grower:—While sitting here alone, as a bachelor usually does, I have been thinking of the statement made by a writer in the Fruit Grower concerning the Panama canal as a damage to the eastern producer. Allow me to say that it is going to benefit both the east and the west. He spoke of the canal's knocking the market of the eastern fruit producer, especially for dried apples. At present we are paying 21 cents per pound for dried apples, 18 cents for prunes, 20 cents for apricots, etc. In place of you people glutting the eastern markets, get together and dry your fruits, make apple butter, jelly, vinegar, etc., and establish markets in the western coast towns, such as Portland, Seattle, Spokane, and many interior points. In this interior country where I am located we use hundreds of tons of fruits and by-products. As a result our lumber industry will boom and will decrease the price of your lumber and put it in reach of the poor man who wants to build himself a home.—Edward B. Clark, Oregon.



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We will send one of these 32-page Record Books to any subscriber who sends us 50 cents to renew his subscription to Green's Fruit Grower for one year. Don't delay! Start your record at once.

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